UNITED
NATIONS

S

Security Council

Distr.
GENERAL

S/1998/1233
29 December 1998

ORIGINAL: ENGLISH

LETTER DATED 29 DECEMBER 1998 FROM THE SECRETARY-GENERAL ADDRESSED TO THE PRESIDENT OF THE SECURITY COUNCIL

Pursuant to paragraph 9 of Security Council resolution 1210 (1998) of 24 November 1998, I have the honour to submit a detailed list of parts and equipment necessary for the purpose described in paragraph 1 of resolution 1175 (1998).

In order to help prepare the above-mentioned list, I dispatched a group of four experts to Iraq. The experts were provided by Saybolt Nederland BV. which, under a contract with the United Nations, has been providing independent oil inspection agents since the beginning of the humanitarian programme in Iraq pursuant to resolution 986 (1995). The group visited Iraq from 13 to 16 December 1998 to review the situation on the ground and, in consultation with the Government of Iraq, to prepare the list of spare parts and equipment necessary to enable Iraq to increase the export of petroleum and petroleum products, in quantities sufficient to produce the sum established in paragraph 2 of resolution 1153 (1998). The report of the group is also enclosed for your information.

As stated in my letter dated 15 April 1998 addressed to the President of the Security Council (S/1998/330) submitting the executive summary of the group of experts established pursuant to paragraph 12 of resolution 1153 (1998), as well as in my subsequent reports, including the most recent one submitted on 19 November 1998 (S/1998/1100) on the implementation of the humanitarian programme under resolution 986 (1995), the oil industry of Iraq continues to be in a lamentable state. It may be recalled that the group of experts had stated then that existing oil fields in Iraq have had their productivity seriously reduced, some irreparably, during the past two decades. They had also stated that a sharp increase in production without concurrent expenditure on spare parts and equipment would severely damage oil-containing rocks and pipeline systems, and would be against accepted principles of "good oilfield husbandry".

The report now submitted by the group of experts describes the further deterioration of Iraq's capacity to produce and export oil. Since the visit of the previous group of experts to Iraq in March 1998, the predicted decline in the overall oil production capacity of Iraq has continued at an estimated annual rate of 4 to 8 per cent. A significant number of wells have ceased production, both in the north and in the south, owing to the lack of water-removal

facilities. The group of experts estimates that approximately 20 per cent of those wells are irreparably damaged. The remaining wells, in their view, could be returned to production should appropriate spare parts be made available on a timely basis, thereby recovering approximately 100,000 barrels per day in production capacity. According to the group of experts, there is a possibility of a net increase in production capacity during the next six months, subject to the timely arrival of critical spare parts. They consider that the list of spare parts and equipment provided by the Government represents a pragmatic approach to sustaining, and eventually increasing, current production levels, albeit reflecting a continued reliance on outdated oil field development concepts.

By its resolution 1153 (1998) the Security Council authorized a substantial increase in exports of petroleum and petroleum products from Iraq and, subsequently, by its resolution 1175 (1998), the Council authorized an amount of $300 million for the purchase of oil spare parts and equipment under phase four of the humanitarian programme. However, the pace of approval of applications for spare parts and equipment has been slow. Unless Iraq is expeditiously provided with the essential oil spare parts and equipment, it may be difficult to sustain even the current level of production and export of oil. The implementation of the humanitarian programme has also been adversely affected by the substantial drop in the price of oil in recent months, resulting in a shortfall of over $1 billion out of the $3.1 billion required for the implementation of the distribution plan under phase four.

As at 28 December 1998, 447 applications, with a total value of $243.2 million, for spare parts and equipment for the Iraqi oil industry have been received, of which 392, with a total value of $182.7 million, were circulated. Of the total number of applications circulated, 238, with a total value of $133.6 million, have been approved by the Security Council Committee established by resolution 661 (1990), and 133, with a total value of $43.6 million, have been placed on hold. There remain 48 applications, with a total value of $60.5 million, which have not yet been circulated because of insufficient information provided by the applicants or because they require amendments to the distribution plan.

As indicated by the group of experts, the list of spare parts and equipment submitted to the Council is "reasonable" and covers the most essential requirements of the deteriorating Iraqi oil industry. It would be helpful, therefore, if the Council could request the Committee established by resolution 661 (1990) to proceed as expeditiously as possible in its consideration and approval of applications for oil spare parts and equipment submitted under phase four and phase five and to also review further all applications placed on hold. In this connection, it may be recalled that most of the spare parts and equipment requested require long delivery periods as they are not immediately available "off the shelf". The Office of the Iraq Programme stands ready to assist the Committee in providing any additional information, including technical advice, that may be required.

(Signed) Kofi A. ANNAN

Annex I

Report of the group of experts established pursuant to paragraph 9 of Security Council resolution 1210 (1998)

A. Terms of reference

1. In paragraph 9 of its resolution 1210 (1998) of 24 November 1998, the Security Council requested "the Secretary-General, in consultation with the Government of Iraq, to submit to the Council, by 31 December 1998, a detailed list of parts and equipment necessary for the purpose described in paragraph 1 of resolution 1175 (1998)." The terms of reference for the group of experts included: the breakdown of upstream and downstream operations, and their interrelationship; an indication of the effect of each line item or project on sustaining current production as well as increasing production; an assessment of the impact of spare parts and equipment made available under phase four on both sustaining and increasing production; clarification of long-term spare parts requirements; and an explanation or definition of nomenclature for spare parts (namely, numbers, lots, sets, measurements).

B. Introduction

2. At the request of the Secretary-General, a group of experts visited Iraq to ascertain the current requirements for spare parts and equipment in relation to Iraq's ability to sustain current export capacity of crude oil and also to review and further assess the potential for increased exports.

3. The group of experts visited Iraq from 13 to 16 December 1998 and met with relevant authorities, particularly the Ministry of Oil, and representatives from all operating companies in the oil sector in order to finalize the list of oil spare parts and equipment.

4. Since the visit of the group of experts to Iraq in March 1998, the predicted decline in the overall oil production capacity of Iraq has continued in the estimated range of 4 to 8 per cent of total production per annum.

5. A significant number of wells have ceased production in both the north and the south, owing to the lack of water-removal facilities. Approximately 20 per cent of those wells are irreparably damaged. The others could be returned to production, with appropriate spare parts, thereby recovering approximately 100,000 barrels per day (bpd) of production capacity.

6. The proposals made by the Government of Iraq to increase production to meet the $5.256 billion ceiling per 180-day phase are innovative and practical, given the existing constraints. The list of spare parts and equipment given to the group of experts by the Government of Iraq for phase V are deemed reasonable. The drilling of replacement production wells in several of the larger oil fields, together with cleaning out and overhauling old wells so that they will produce more oil, and improvements to the downstream systems, should succeed in replacing oil volumes which have been lost through the processes described above.

7. There is a possibility of a net increase in production capacity during the next six months, but this is dependent on the timing of the arrival of critical spares. However, it must be noted that the entire programme for the oil industry of Iraq is out of step with modern engineering techniques and generally accepted principles of "value for money" investment. The phase V list of spare parts reflects a proposed expenditure on valid items, but it relies on outdated oil field development concepts. It is extremely unlikely that the Iraqi oil industry will ever meet the planned production targets associated with the oil-for-food programme, within the current constraints.

8. An approach recommended by the group of experts would be the implementation of a programme to drill horizontal wells (rather than the present vertical ones) to substantially increase production performance, minimize the influx of water and restrict damage to the reservoirs. The list of spare parts and equipment required for such an approach would differ significantly from the list submitted for phase V, but would represent an optimal return on funds available.

9. Since the previous visit by the group of experts in March 1998, the oil industry of Iraq has been reorganized into 13 separate operating companies, each of which has been allocated funds by the Government of Iraq for spare parts under phase V of the oil-for-food programme, as follows:

Company name	Allocation (United States dollars)
North Oil Company	85 000 000
South Oil Company	100 000 000
Iraqi Drilling Company	20 000 000
Oil Projects Company	10 000 000
Oil Exploration Company	5 000 000
North Refineries Company	32 000 000
Midland Refineries Company	10 000 000
South Refineries Company	5 000 000
North Gas Company	4 000 000
South Gas Company	4 000 000
Oil Products Distribution Company	10 000 000
Oil Pipelines Company	5 000 000
Gas Filling Company	10 000 000
TOTAL	300 000 000

10. The Government of Iraq declined to specify the individual prices of specific items, projects or grouping of spare parts beyond advising on the allocation of funds within the $300 million allocated under resolution 1210 (1998).

C. Overview

11. Current oil production is estimated at 2.5 million bpd. Current local consumption is said to be 550,000 bpd, and 70,000 bpd are still exported to Jordan, leaving 1,880,000 bpd available for export.

12. The average exported volume under phase IV was 1,712,000 bpd.

13. The Ministry of Oil predicts that, at best, production can only be sustained at a level of 2.5 million bpd until the spare parts procured under phase IV have been received and installed, and crucial spare parts to be ordered under phase V arrive and have been installed. Any increase in production over current levels is thought unlikely to be achieved until March 2000, after which export capacity is expected to increase in incremental steps as the effects of certain projects (for example, water injection) are realized.

14. The Ministry of Oil advises that production difficulties are currently being experienced. In the north, production has been lost from 25 wells because of water problems and it is estimated that production will be lost from another 30 before spare parts ordered under phase IV arrive; and in the south, production water problems are coupled with pressure maintenance resulting from a lack of water injection. It must be recognized that while the main objective is at least to sustain current production levels beyond phase V, irreparable damage is meanwhile being done to producing wells.

D. Spare parts and equipment

15. The list of oil spare parts and equipment for phase V is submitted in 13 sections, subdivided by operating companies, each with an allocation of funds determined by the Government of Iraq. These allocations have been made on the basis of perceived need, taking into account current production problems.

16. There is no allocation for the Iraqi State Organization for the Marketing of Oil (SOMO) as there are no requests from this company.

17. The overall objective in determining spare parts and equipment within phase V is to sustain current oil production levels. As production is being lost to wells watering out, and as the ability of the industry to treat crude oil prior to export (for example, de-gassing, de-watering) is limited because crucial spare parts have yet to arrive and be installed, the Government of Iraq has moved toward prioritizing projects to compensate for lost production. This is coupled within phase V with certain projects which would increase the volume of oil available to sustain production and eventually increase crude oil exports.

18. Specific reference to the relevance and rationale for the selection of spare parts and equipment is made in the following sections, which provide greater detail of the spare parts requirements for each operating company. The list provided by the Government of Iraq under the distribution plan for phase V was updated as a result of discussions held in Iraq during the visit of the group of experts. Comments have been provided per line item, as appropriate.

North Oil Company - $85,000,000

19. The current stated production capacity of the North Oil Company of Iraq is 1,197,000 bpd, which includes 20,000 bpd from Saddam Field. In the last eight months, a further 25 wells have started to produce water and oil and have been shut down (mainly in Kirkuk and Bai Hassan). The trend towards wells becoming water-wet indicates a further 30 wells may be expected to be shut down during phase V. The arrival and continued supply of de-watering chemicals should alleviate one aspect of the problem, and allow the reopening of most of these wells.

20. However, some permanent damage has been done to the wells by the influx of water, and without the facilities for overhaul, the only solution has been to close the affected wells.

21. The quantities of chemicals and other materials necessary for the drilling of 25 replacement wells in Avaneh Dome (Kirkuk Field), Khabbaz and Bai Hassan) are deemed reasonable. At current market prices, these elements represent about one-third of the cost of spare parts for the North Oil Company (namely, between $25 and $30 million). A limited amount of old wellheads, etc., are available in the North Oil Company's stocks; hence, there is a lesser spare parts requirement than would be expected for the number of supplemental production wells that are proposed.

22. It is impossible to envisage a "value-for-money" investment in these activities without a technical evaluation and the use of control equipment. Thus, the requests for spare parts and equipment for well-perforating, geological laboratories, coring, reservoir simulation facilities, wire line units, etc., should be considered within the context of the overall application of funds. These activities could be covered at current prices with $5 to $7 million.

23. It should be noted that the 25 vertical wells proposed will not increase production capacity but might sustain the levels achieved in phase IV because they will penetrate oil columns which are known to have been reduced in vertical extent. The oil-water contacts have been moving upwards through the reservoirs as depletion takes place, and the water underneath flows into the perforations in the production pipe. The surface facilities are very sensitive to the water content in the oil, and cannot function in certain cases with more than 0.5 per cent water content. The arrival of phase IV de-watering chemicals will allow a number of wells to be reopened if they have not been damaged by the effects of the reservoir water on the flow properties of the oil-producing rocks.

South Oil Company - $100,000,000

24. The North Rumaila Field redevelopment project, which includes the overhaul of 50 existing wells, the drilling of 25 new water injectors and 15 new wells, is projected to result in a 200,000 bpd improvement in production capacity. The spare parts and equipment requirement for this project is not unreasonable, and the drilling and well-completion materials are estimated to constitute about half the amount estimated (namely, $50 million). The wells are deeper than those in the north and thus give rise to a higher expenditure per well.

25. It is impossible to envisage a "value-for-money" investment in these activities without a technical evaluation and the use of control equipment. Thus, the requests for spares for well-perforating, geological laboratories, coring, reservoir simulation facilities, wire line unit, etc., should be accepted in the context of the overall application of funds. These activities could be covered at current prices with $7 to $9 million.

26. The same comments apply in the south as to the North Oil Company regarding the cost-effectiveness of providing spares for a vertical drilling solution to the ever-deteriorating production capacity. If horizontal wells were to be used, fewer wells than in the phase V proposals would be required to both sustain and increase oil production. The nature of the spare parts and equipment required for surface facilities would not change, but the reservoir assessment and development drilling spare parts list and prices would have to be revised.

Iraqi Drilling Company - $20,000,000

27. The need to drill extra production wells, water-injection wells, and to overhaul existing oil producing wells, creates a demand for expertise in this area. A number of relevant facts were gathered concerning the drilling company and other facilities when the group of experts was visiting nearby sites.

28. In particular, most rigs were observed to be in a lamentable state and to have fallen into disuse since 1990. The spare parts and equipment proposed for 20 rigs to complete the programmes in the north and south would cost more than the proposed expenditure if purchased new.

Oil Projects Company - $10,000,000

29. This company is involved in construction projects on behalf of the operating companies throughout Iraq and acts as a contractor. Its requirements therefore cover the whole spectrum of construction, maintenance and testing of new and repaired structures, including non-destructive testing (NDT). The list of spare parts and equipment includes NDT equipment, project management software, and standards, construction and maintenance equipment.

Oil Exploration Company - $5,000,000

30. The entire reservoir management concept (namely, the need to replace lost wells and to address declining production with infill producing wells, water-injection wells and overhauled wells) which serves as the rationale behind the

list of spare parts and equipment for phase V, requires information about the rock structure and the position of oil and water within the reservoirs. All the items listed are prerequisites for successful field rehabilitation and development programmes and are deemed essential. The level of funding requested is probably insufficient to cover all of the projects envisaged, and it is unlikely to result in a much-increased ability to determine where to drill or to inject water, or which wells would benefit most from overhaul.

31. The list of spare parts and equipment for the Oil Exploration Company represents an integrated whole, and the deletion of any item would undermine the value to be obtained from those items under phase V.

32. Technical training and support are normally provided with the delivery of spare parts and equipment, and included in the prices quoted by suppliers. Many of the items will be useless without some form of assistance to analyse the data obtained and thereby design a meaningful production-enhancement programme.

North Refineries Company - $32,000,000

33. The Baiji Refinery sustained heavy damage in past conflict yet remains the largest and most modern refinery in Iraq, and it is a key component in the production of refined petroleum products. The list of spare parts and equipment for this facility is based on two main projects, and general repairs and maintenance:

(a) Hydro cracker unit. The primary function of the hydro cracker unit is to convert surplus fuel oil into gasoline and diesel fuels that would otherwise be in shortage. The repair of this unit will result in products (particularly gasoline, kerosene and gas oil) of better quality. This will allow power plants to burn fuel oil rather than crude oil, as at present, releasing an estimated 60,000 bpd of crude oil for export; the refined products will have a much lower sulphur content and will also reduce environmental damage;

(b) Waste water treatment plant. This badly damaged unit, with spare parts already approved under phase IV, requires further work before completion and will significantly reduce the oil content of effluent water discharged into the Tigris River and the surrounding water table;

(c) Mechanical equipment spares and spare parts kits. Similar to spare parts for this facility under phase IV, this list of spare parts and equipment covers numerous repairs to the rotating and static equipment in the refinery and again will significantly impact the quality of refined products produced. In particular, the supply of fuel oil to the adjacent power plants to replace its current usage of crude oil will release 100,000 bpd of crude oil for export.

Midland Refineries Company - $10,000,000

34. The Daura Refinery is situated in the outskirts of Baghdad. The spare parts and equipment listed are intended for repairs to the water treatment plant, lubricating oil plant, and general repair and maintenance. The expected effect of the proposed repairs would be an increase in the availability of crude

oil for export of up to 60,000 bpd, and an increase in the production of reasonable quality lubricating oil to 100,000 tonnes per annum:

(a) Water treatment plant. A complete water treatment unit is necessary, which would improve the quality of effluent water released directly into the Tigris River in the immediate vicinity of Baghdad;

(b) Spare parts for lubricating oil plant. The quality of lubricating oil produced in Iraq remains extremely poor, resulting in significantly shorter maintenance periods, breakdowns and increased consumption.

South Refineries Company - $5,000,000

35. The Basrah Refinery, situated in the south, has been severely damaged. The list of spare parts and equipment for this facility seeks to address several vital issues, including the provision of better quality drinking water for the oil industry workers, safety issues, and the upgrading of the quality of refined products releasing crude oil for export:

(a) General spare parts for rotating machinery. The installation of these spare parts will allow the production of increased quality products (gas oil and fuel oil), which can be substituted for direct crude oil usage. The predicted net compensation effect on completion of the installation of these spare parts will eventually be 50,000 bpd;

(b) Upgrading of potable fresh water system and transportation to site. The normal drinking water available in the Basrah region is both unsafe and unreliable. The spare parts allocation covers repairs to the water treatment facility and tankers for delivery of this water to working sites in the southern refineries area;

(c) Instruments for environmental protection. The spare parts and equipment under this group are intended to cover laboratory equipment, especially gas analysers, to provide improved safety and environmental control of refinery operations.

North Gas Company - $4,000,000

36. For the Kirkuk region, the list of spare parts and equipment is intended for the gas treatment plants in the north, which are utilized to extract gas from the crude oil prior to export. Sustaining the operation of these plants and increasing their efficiency will allow increased effectiveness in the treatment of crude oil, thereby increasing the amount of gas extracted, which can then be used as a power source in power stations, consequently enhancing the volume of crude oil available for export.

South Gas Company - $4,000,000

37. For Basrah, the list of spare parts and equipment is intended for the gas treatment plants in the south, potable water transportation equipment, safety equipment and the construction of a 25-kilometre pipeline in the Anzalah region. Construction of this line will allow transfer of crude oil from the southern

production area to the north, and from there for export via the Kirkuk-Yumurtalik pipeline to Ceyhan.

Oil Products Distribution Company - $10,000,000

38. This new company has been set up to increase the efficiency of product distribution throughout the country. As a result of severe damage to the products pipeline distribution network in certain areas, and the large geographical area covered, refined product distribution is currently undertaken mainly by vehicular transport.

39. Spare parts and equipment for this facility include vehicles, fuel dispensers, meters and associated equipment, electrical equipment spares and the construction of a number of large storage tanks at key sites.

40. The expected benefit of the spare parts indicated will be to significantly reduce leakages, which account for some 7 per cent of the volume of products distributed, with obvious associated environmental effects. Reduction of these losses (some as simple as leaking washers on fuel dispenser pumps) will reduce the refined oil product requirement, releasing crude oil for export.

Oil Pipelines Company - $5,000,000

41. This list of spare parts and equipment covers repairs to oil depots, pumping stations and the pipeline network designed to distribute refined oil products throughout Iraq. As a result of significant damage, much of the product distribution is currently undertaken by road vehicles, which is inefficient, dangerous and unreliable; repair and maintenance within this sector is essential.

Gas Filling Company - $10,000,000

42. Much of the list of spare parts and equipment includes repeat items for the Gas Filling Company which were applied for under phase IV but for which insufficient funds were available. There are approximately 12 million liquid propane gas (LPG) cylinders in Iraq that are 10 to 30 years old. Normal cylinder life span is 15 years maximum, backed by annual individual cylinder pressure testing, which is not currently done in Iraq. In Iraq, each cylinder is filled about 10 times per annum, whereas international standards indicate an average of five to seven times per annum. The Gas Filling Company also repairs damaged cylinders, which is prohibited internationally. Approximately 250,000 cylinders are destroyed annually and, with the exception of those requested under phase IV, no new cylinders have been purchased since 1989.

43. The list includes 500,000 replacement cylinders, spare parts, safety and maintenance equipment, and chemicals to assist in the detection of LPG cylinder leaks.

E. Conclusion

44. The general opinion of the group of experts is that the list of spare parts and equipment provided by the Government of Iraq represents a pragmatic approach to sustaining, and eventually incrementally increasing, current production levels, albeit reflecting a continued reliance on outdated oil field development concepts.

45. With reference to the report of the group of experts on their mission in March 1998, it may be said that so far no significant improvements have been made, mainly because of the fact that actual deliveries of spare parts and equipment ordered under phase IV are only starting to take place now. The group of experts shares the opinion of the Iraqi Ministry of Oil that it is unlikely that an increase in production will be achieved before March 2000. The main objective of the Government of Iraq at this time is to sustain current production levels through and beyond phase V.

46. Finally, the group noted that there appears to be duplication in many cases between the list submitted for phase IV, and the list for phase V. The reason for this apparent duplication is that, as stated in the previous report of the group of experts, the prices of the requested spare parts and equipment for phase IV were marginally higher than estimated and would have resulted in the exceeding of the allocation of $300 million for spare parts and equipment.

Appendix

Petroleum engineering glossary

Horizontal wells

The engineering approach to developing oilfields evolved significantly in the early 1990s with a conceptual leap which was stunning in its simplicity. Some degree of technical innovation accompanied the switch from drilling vertical holes in the ground to the idea of "turning" the well as it progressed until it intersected the oil-containing layers and drilled along them rather than through them. The techniques for creating so-called "deviated" wells had been employed since the late 1960s, but improvements in drilling equipment and materials were necessary before it was proved that the well-bore could remain in the oil-containing horizontal layers, and avoid the water below, by staying horizontal.

Hydro cracking

Hydro cracking plays a crucial role in crude oil refining whereby clean transportation fuels are made out of residual oil fractions.

Infill drilling/infill wells

Most oilfields in Iraq cover tens of square miles in extent, and the oil-producing layers are at relatively shallow depths, especially in the north. The conventional method of tapping the oil has been to drill wells straight down to the reservoirs; wells in the large Kirkuk field are spaced about 3,000 feet apart (that is, more than half a mile). When some of these wells start producing water, which cannot be handled at the surface facilities, they are shut down. In order to efficiently drain the reservoir volumes between these widely-spaced points, infill wells are drilled, because there is at least a 90 per cent probability that a new vertical well will also penetrate an oil-rich layer of rock.

Injected water

As oil is drawn off the reservoir, the pressure gradual declines, and the productivity index (and rate of production) also falls away, often exponentially downwards. It is possible to significantly delay this process by injecting either gas and/or water into the reservoir to achieve a degree of pressure-maintenance. Often, the water is injected in very large quantities into the bottom periphery of the reservoir to assist in optimizing the recovery of oil. This water must be treated with biocides, filtered and then pumped at great pressure to be effective.

Injection wells

The wells that are used for pressure maintenance, whether gas or water.

Oil production capacity in barrels per day (bpd)

The optimum total volume of oil that Iraq can produce during a given 24-hour period from approximately 450 wells in 24 oilfields, under ideal conditions, if there are no pipeline leaks, treatment facility breakdowns, or shortages of de-gassing equipment and de-watering chemicals.

Oil well productivity index (PI)

A measure of the daily amount of fluids which an oil well can produce per unit of reservoir pressure. Usually, a horizontal well in a given oil reservoir will have a PI far greater than that of a vertical well penetrating the same reservoir; often a horizontal well will be from 2 to 10 times more productive than its vertical neighbour.

Perforating

In order to allow oil to be produced from a reservoir, it is necessary to provide a flow-path from the bottom of the well to the surface production facilities. By lowering a bundle of small, shaped, explosive charges down the well on a wire-line, it is possible to "shoot" holes in the foot of the casing so that the reservoir rocks are connected to the well proper.

Produced water

Most Iraqi oil reservoirs also contain vast aquifers of saline water upon which the oil floats. The reservoir consists of various types of porous rock which contain the oil and the water. Initially there may also be a volume of gas trapped above the oil. As oil is drawn out of the reservoir, the water moves to occupy the space left. If the oil is produced too quickly or over a great length of time, the reservoir water also starts to appear in the fluid produced from the well; the oil is said to be "wet crude" or "water-cut".

3-D seismic

In order to accurately define the whereabouts of the layers of oil-bearing rocks, once an oilfield has been discovered, modern techniques using sound-waves are applied on a fairly close-gridded spacing over the entire surface area of the field. A three-dimensional "picture" of the subsurface rocks is generated which can help identify the best places to drill horizontal wells and achieve the optimum production rates and recovery from the reserves of hydrocarbons in the rocks below.

Wire line unit

Once oil wells have been drilled, they are lined with steel tube (casing) and other equipment to enable the flow of produced fluids to be controlled and measured. As time passes, the equipment "downhole" may corrode and require replacement. The easiest method of changing valves, etc. (which may be located several thousand feet down the well), is to lower various tools on a thin wire cable into the well, and pull the offending items out. The equipment used to

perform this work is a wire line unit (a very long length of cable wound on a motorized drum).

Annex II

Phase five oil sector requirements - list of spare parts and equipment

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MINISTRY OF OIL

FILE NO. :- 08-05

PHASE V OIL SECTOR REQUIREMENTS

COMPANY NAME	FUNDS ALLOCATED X 1000 $.
NORTH OIL COMPANY	85 000
SOUTH OIL COMPANY	100 000
IRAQI DRILLING COMPANY	20 000
OIL PROJECTS COMPANY	10 000
OIL EXPLORATION COMPANY	5 000
NORTH REFINERIES COMPANY	32 000
MIDLAND REFINERIES COMPANY	10 000
SOUTH REFINERIES COMPANY	5 000
NORTH GAS COMPANY	4 000
SOUTH GAS COMPANY	4 000
OIL PRODUCT DISTRIBUTION COMPANY	10 000
OIL PIPELINES COMPANY	5 000
GAS FILLING COMPANY	10 000
GRAND TOTAL	[redacted]

ALLOCATED BY
UNSCR (1210)

MINISTRY OF OIL
ESTABLISHMENT NAME: NORTH OIL COMPANY
LOCATION : ALL NOC FIELDS
(MAINLY KIRKUK , KHABBAZ , & BAI HASSAN)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	DRILLING AND WORKOVERS REQUIREMENTS FOR PRODUCTION MAINTENANCE A. DRILLING OF 25 NEW WELLS:			Parts for drilling 25 new wells resulting in 150,000 bopd increase in production
08-05-00001	- CASING (VARIOUS SIZES, GRADES AND WEIGHTS).	M.	80 000	"
08-05-00002	- TUBING (VARIOUS SIZES, GRADES AND WEIGHTS)	M.	38 000	"
08-05-00003	- WELL HEADS & XMAS TREES (VARIOUS).	Assembly	25	"
08-05-00004	- CASING ACCESSORIES (VARIOUS).	NOS.	3 000	"
08-05-00005	- UNCEMENTED LINER HANGER 4 1/2"x 7".	SET	15	"
08-05-00006	- CEMENTED LINER HANGER 4 1/2 "x 7".	SET	2	"
08-05-00007	- ROCK BITS.	NOS.	250	"
08-05-00008	- NOZZELS (VARIOUS).	SET	200	"
08-05-00009	- CORE HEADFOR TAKING CORSIN DEVELOPMENT WELLS.	NO.	1	"
08-05-00010	- THREAD SEAL COMPOUND.	CAN/G	200	"
08-05-00011	- THREAD LOCK.	KIT	200	"
08-05-00012	- OIL WELL CEMENT & ADDITIVES.	TON	550	"
08-05-00013	- MUD MATERIALS (DRILLING FLUIDS SUCH US:- BARYTES, BENTONITE, FCL, CMC,LV,SODA ASH,HCE, HCL,GILTON2, CALCHLORIDE, SODIUM BICARB,CAUSTIC SODA,RHODOPOL,POLYMER CELLOLOSE, C LIGNITE, CMC-HV,FCL,STARCH,IMCO SPOT, ANTIFOAM, XCPOLYMER SODUIM DIOCOMATE, ATA BULGITE, ETC	TON	8 300	"

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CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	B. WORK OVER & LONG TERM TESTING OF "20" WELLS:			Workover of 20 new wells increasing production by 30,000 bopd
08-05-00014	- X-MAS TREE & TUBING HANGER FOR SOUR SERVICE (VARIOUS SIZES).	Assembly	20	"
08-05-00015	- SPARE PARTS FOR WELL HEADS.	SET	10	"
08-05-00016	- DOUBLE STUDDED ADAPTORS & ACCESSORIES.	NOS.	15	"
08-05-00017	- UNCEMENTED LINER HANGER 4 1/2 " X 7"	SET	15	"
08-05-00018	- TUBING (VARIOUS SIZES)GRADES AND WEIGHTS).	M.	35 000	"
08-05-00019	- CASING 4 1/2".	M.	5 000	"
08-05-00020	- X-OVER SUBS FOR TUBING (VARIOUS).	NO.	100	"
08-05-00021	- SINGLE PACKER WITH ALL ACCESSORIES.	SET	12	"
08-05-00022	- DUAL PACKER WITH ALL ACCESSORIES & SPARE PARTS.	SET	3	"
08-05-00023	- ROCK BITS (VARIOUS SIZES).	NO.	40	"
08-05-00024	- MUD MATERIALS (DRILLING FLUIDS AS IN CODE 13 ABOVE	TON	2 000	"
08-05-00025	- BRIDGE PLUGS.	NO.	12	"
08-05-00026	- WELL PERFORATION CHARGES, PRIMA CORD, STRAPS AND DETONATORS FOR (15) WELLS.	LOT	1	"

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	C. SUPPORTING MATERIALS AND EQUIPMENT FOR WELLS PRODUCTION MAINTENANCE:			
08-05-00027	- LAB. TESTING APPARTOUS, COMPLETE WITH ACCESSORIES FOR OIL, GAS AND WATER QUALITY CONTROL	SET	25	General labcratory apparatus for product quality control
08-05-00028	- LAB. TESTING EQUIPMENT, MATERIALS & SPARES FOR ENVIRONMENT POLLUTION CONTROL.	SET	6	Laboratory apparatus for air pollution analyses
08-05-00029	- LAB TESTING EQUIPMENT, COMPLETE WITH ACCESSORIES FOR GEOLOGICAL CONTROL.	SET	15	Standard set of laboratory equipment for geological survey
08-05-00030	- LAB. TESTING EQUIPMENT, MATERIALS & SPARES FOR DRILLING FLUID.	SET	5	Laboratory equipment for analysis of drilling fluids "on-site"
08-05-00031	- CEMENTING UNIT (COMPLETE WITH ACCESSORIES).	SET	2	Maintenance unit
08-05-00032	- SPARE PARTS FOR CEMENTING UNIT & EQUIPMENT (GENERAL & MECHANICAL)	SET	1	Spare Parts for above
08-05-00033	- FORMATION TESTING TRUCK FOR WELL SERVICES	SET	2	Transport for well services
08-05-00034	- WELL LOGGING SERVICES AND LOG INTERPRETATION PACKAGE	SET	1	Software and hardware for well logging
08-05-00035	- RESERVOIR SIMULATION PACKAGE.	SET	1	Complete reservoir software and hardware package
08-05-00036	- COILED TUBING UNIT AND NITROGEN UNIT (TRAILER TYPE).	EACH	1	Equipment for well logging
08-05-00037	- WIRE LINE EQUIPMENT AND SPARES FOR FIELD MEASUREMENT AND EQUIPMENT FOR WELL COMPLETION	SET	1	Wire line equipment for well logging
08-05-00038	- SPARES (RUBBER LINED, VALVES AND FITTINGS) FOR HYDROCHLORIC ACID STORAGE PLANT.	SET	1	Spares for exploration

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00039	REPAIR OF THREE BRINE PONDS IN UNDER GROUND STORAGE PROJECT , THIS INCLUDES THE FOLLOWING ITEMS: - LINING BY SPECIAL PLASTIC LAYERS - PERMEABLE LAYER - SPECIAL MATERIAL LAYER FOR POND INCLUDING SIDES - SPECIAL PLASTIC COVER FOR POND - EQUIPMENT FOR POND GRADING ; LINING & WELDING OF PLASTIC LAYERS.	 M2 M2 M2 M2 LOT	 60 000 33 000 15 000 60 000 3	Repair of brine storage reservoirs for use in LPG production and storage
08-05-00040	- UNDER GROUND STORAGE CAVITIES ECHOLOG SURVEY FOR 7 CAVITIES (SERVICE)	SET	7	Service contract for underground LPG storage facilities
08-05-00041	- SPECIAL WELL HEADS FOR UNDER GROUND STORAGE CAVITIES, OF 9 5/8" X7" X5"X2000 PSI	SET	5	Well heads for same
08-05-00042	- CRUDE PUMPS WITH ELECT. MOTORS FOR JAMBUR SOUTH DEG. STN. CAPACITY = 10000 BPD SP. GR. =0.7000-0.8350 SUCTION PRESSURE = ATM DISCH. PRESSURE = 400 PSIG	SET	3	Condensat[illegible]mps which would increase export by 5,000 bpd

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00043	AIN ZALAH - IT2A PUMPING AND TRANSPORTATION EQUIPMENT INCLUDES : - CRUDE PUMP / MOTOR CAPACITY 10000 BOPD EACH SUCTION PRESSURE = ATM DISCHARGE PRESSURE = 450 PSIG COMPLETE WITH TRANSFORMERS , SWITCH GEAR, MCC & ALL REQUIRED CABLES AND ELECTRICAL POWER SUPPLY TO THE ABOVE PUMPS AND ONE MAIN TRANSFORMER. - PIPE OF 12" SIZE WITH ALL NECESSARY VALVES AND FITTINGS .	SET KM	3 15	New line section and pumping facilities connecting Ain Zalah and IT-2 increasing export potential by 17,000 bpd
08-05-00044	WATER INJECTION PUMPS/AIN ZALAH: - WATER PUMP/ MOTOR SET: CAPACITY 10000 BOPD EACH SUCTION PRESSURE = ATM DISCHARGE PRESSURE = 600 PSIG COMPLETE WITH TRANSFORMER , SWITCH GEAR, MCC & ALL REQUIRED CABLES AND ELECTRICAL POWER SUPPLY TO THE ABOVE MOTORS.	SET	2	Water injection pumps for Ain Zalah creating new crude production for transfer as in above
08-05-00045	SPARES FOR AIN ZALAH OIL FIELD INCLUDING: - SFAIA AIR COMPRESSOR, WATER TREATMENT SYSTEM, UPS).	SET	5	As above
08-05-00046	SPARE PARTS FOR EAST BAGHDAD FIELD EQUIPMENT INCLUDING : - GAS COMPRESSOR, CONTROL ROOM COMPUTER, F. C. V, SWITCH GEAR, S/D VALVES.	SET	8	Complimentary equipment and spares allowing more efficient transfer to refinery releasing up to 20,000 bpd crude for export

MINISTRY OF OIL
ESTABLISHMENT NAME: NORTH OIL COMPANY
LOCATION: BAI HASSAN, KIRKUK
(AVANAH & KHURMALA) & AINZALA FIELDS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00047	WET CRUDE TREATMENT EQUIPMENT FOR THE FOLLOWING FIELDS: - BAI HASSAN - 5 TRAINS X 35000 BOPD OF STOCK TANK CONDITIONS - AVANAH - 3 TRAINS X 50000 BOPD OF STOCK TANK CONDITIONS. - AIN ZALAH - 1 TRAIN X 15000 BOPD STOCK TANK CONDITIONS. H TRAIN INCLUDES THE FOLLOWING: - TRANSFORMERS, SWITCH GEARS, MCC, CABLES AND OTHER ELECTRICAL POWER SUPPLY AND DISTRIBUTION EQUIPMENT. CONTROL SYSTEM FOR FIELD AND SCADA SYSTEM CONTROL, AND CABLES.... ETC . ALL NECESSARY PUMPS FOR CRUDE OIL, WATER & CHEMICAL INJECTION . ALL NECESSARY TANKS FOR CRUDE OIL & WATER . DEHYDRATION DESALTING EQUIPMENT WITH ALL REQUIRED ACCESSORIES . EFFLUENT WATER TREATMENT EQUIPMENT .	TRAIN TRAIN TRAIN	5 3 1	Bai Hassan trains will compensate for 50,000 bpd loss of production; Avanah trains will compensate for loss of wells to water; Ain Zalah train will compensate for loss of wells to water and create an additional 10,000 bpd production. DELIVERY OF THESE ITEMS IS 420 DAYS FROM OPENING LETTER OF CREDIT
08-05-00048	- PHASE (1) OF THE DEVELOPMENT OF KHURMALA DOME (PIPES , MANIFOLDS , FITTINGS ....etc.) & THE COMMENCEMENT OF SURFACE INSTALLATION: - FLOWLINES (6-10") - TRUNK LINE 20" - MANIFOLD - VALVES & FITTINGS - CONTRACT	KM KM SET LOT	20 22 1 1 1	New production from the 3rd dome of KIRKUK field creating 15,000 bpd production. This development will take minimum 4 months after arrival of equipment

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MINISTRY OF OIL
ESTABLISHMENT NAME: NORTH OIL COMPANY
LOCATION: KIRKUK, BAI HASSAN & JAMBUR FIELD

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00049	- CORROSION INHIBITOR PUMPS FOR GAS COMPRESSOR STATION COMPLETE WITH E. MOTOR CAPACITY RANGE FROM 10 TO 150 LITER/DAY DISCHARGE PRESSURE RANGE FROM 4.0 TO 40 BAR	NOS.	30	Replacement pumps not ordered under Phase 4 owing to lack of funds
08-05-00050	- TRI ETHYLENE GLYCOLE PUMPS CAPACITY BETWEEN 7.0-20 M3/HR DISCHARGE PRESSURE 40 BAR	NOS.	24	Same as above
08-05-00051	CHEMICALS FOR PRODUCTION& PROCESSING: - DEMULSIFIER - CORROSION INHIBITOR - POLYELECTROLYTE - O2 SCAVENGER BSED FOR AFFLUENT WATER TREATMENT - BIOCIDE: TO KILL BACTERIA IN AFFLUENT-WATER. - ELEMINOX: ELIMINATES OXYGEN IN BOILER WATER - CaO - SODIUM CARBONATE - ALGESTAT: FOR NEMOVAL OF AIGIE IN COOLING TOWER & BOILERS - SODIUM TRI PHOSPHATE - CORROSION AND SCALE INHIBITOR FOR COOLING TOWERS.	 LTR LTR LTR LTR LTR KG LTR LTR LTR KG LTR	 200 000 120 000 60 000 40 000 20 000 200 4 000 8 000 10 000 200 20 000	Chemicals for improving production processing

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00052	- SLOP SYSTEM UNIT PUMP 3" X 4" CAP - (50) CMPH HEAD - (80) PSI S. PRES. - ATM UNIT COMPLETE WITH ELECT. MOTOR	NOS.	4	Improving slop drainage and reducing environmental damage
08-05-00053	- MOBILE STEAM GENERATOR (BOILER): 5 TPH	NOS.	2	Required for steaming out tanks before repair
08-05-00054	- UPGRADING OF OLD ITP/L MAIN PUMPS FROM 5000 M3/H TO 7000 M3/H	NOS.	4	Improving pumping capability for export
08-05-00055	- DIESEL DRIVEN LOW LIFT PUMP	NOS.	6	Maintenance & pollution control
08-05-00056	- DIESEL DRIVEN HIGH DISCHARGE PUMP	NOS.	6	Maintenance & pollution control
08-05-00057	- CHAIN SPANNER (HEAVY DUTY)	NOS.	20	Maintenance
08-05-00058	- MEASURING INSTRUMENTS FOR ENVIRONMENTAL PROTECTION.	SET	10	Environmental control

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00059	REHABILITATION OF ITP METERING STATION (FOR 40 & 46 INCH PIPE LINE): FIELD INSTRUMENTS FLOW COMPUTERS PROVER CONTROL SYSTEM ELECTRICALLY DRIVEN SLOP PUMP	SYSTEM	2	Allows measurement of oil at Zahko for export where only one line currently metered
08-05-00060	- REPLACEMENT OF THE EXISTING OBSOLETE TELEMETRY / TELECONTROL SYSTEM OF ITP PUMP STATIONS (SCADA).	SYSTEM	1	Communication between ITP pumping stations
08-05-00061	- REWINDING OF ITP,K1 MAIN MOTOR AND POWER STATION EXCITERS(ABROAD)	NOS.	6	Repair of electrical motors for export pumps to be effected overseas
08-05-00062	- INTELLIGENT PIGGING OF 32 INCH PIPE LINE 340 KM LONG & NECESSARY REPAIR (SUPPLY OF BIG TRABS, FITTINGS AND 32" LINEPIPE: LENGTH ACCORDING TO TEST RESULTS)	LOT	1	Intelligent pigging of pipeline from K1 to Syrian border for which no funds available under Phase 4
08-05-00063	- SLUDGE REMOVAL CRUDE OIL TANKS AT K1 DEPOT	CONTR.	1	Pollution control
08-05-00064	COMPLETION OF SADDAM OIL FIELD PROJECT INCLUDING : - COMPLETION OF 132/33 KV SUBSTATION FOR SADDAM OIL FIELD - COMPLETION OF SADDAM OIL FIELD PROJECT WHICH INCLUDE: - DIFFERENT ELECTRICALLY DRIVEN CRUDE / WATER / CHEMICAL PUMP - DIFFERENT VESSELS - WATER TREATMENT & SLOP SYSTEM - FLARE IGNITION SYSTEM - MAIN CRUDE TRANSFER PUMPS - VARIOUS INSTRUMENTATION , FITTINGS & VALVES	LOT	1	Completion of repairs to Saddam field resulting in further 25,000 bpd crude oil for export.

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00065	- GAS COMPRESSOR – GAS TURBINE COMPLETE WITH ALL ACC. AS A 2ND TRAIN FOR AB/8.	SET	1	All items refer to increasing gas treatment and production which constrain crude oil export
08-05-00066	- REPLACEMENT OF SOLAR GAS TURBINE TYPE : T4700	SET	1	Same
08-05-00067	- HITACHI GAS TURBINE OVERHAUL SPARE PARTS.	SET	4	Same
08-05-00068	- REPLACEMENT OF GAS COMPRESSOR OF AB\11.	NOS.	1	Same
08-05-00069	- SPARES FOR THERMODYN COMPRESSORS .	SET	1	Same
08-05-00070	- ONE (2+2 MB/S) & TWO (2 MB/S) DIGITAL RADIO LINKS OPERATING IN THE 2.6 GHZ BAND IN HSB MODE COMPLETE WITH MUX & TERMINATION UNITS (LB, CB, SUB & EXCH) & SUPERVISORY SYSTEM TO MONITOR SYSTEM PERFORMANCE, COMPLETE WITH POWER SUPPLY (CHARGER & BATT.) , TEST SET & RECOMMENDED SPARE PARTS	LINK	3	Control of operations in Gas Compressor Stations

ESTABLISHMENT NAME: NORTH OIL COMPANY LOCATION: ALL COMPANY AREAS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00071	- VALVES & FITTING WITH VARIOUS RATINGS & CLASSES FOR THE CONNECTIONS OF WELLS. - FLOW LINES 4 ,6,8,10 INCH FOR WELL CONNECTIONS .	SET KM	25 35	All items cover safety, maintenance and storage
08-05-00072	- WATER INJECTION P/L RIVER CROSSING (20) INCH (ZAB).	KM	2	"
08-05-00073	- REPLACEMENT OF GAS TURBINE CONTROL PANEL & ACC. IN WATER INJECTION & AVANAH (P. S) .	SETS	12	"
08-05-00074	- SWITCH GEAR , CABLE , ACC. FOR SUBMERSIBLE OIL PUMPS AT JABEL BOOR	SET	3	"
08-05-00075	- CRUDE OIL TANK + PIPING WORK , INSTRUMENTATION & ELECTRICALS (FOR OPERATION FROM K3 CONTROL ROOM)	SET	8	"
08-05-00076	- SULZER TURBINES ROTORS WITH THE NECESSARY INSTRUMENTATION & CONTROL AT K3	SET	3	"
08-05-00077	- ELECTRICAL DRIVEN MULTI-STAGE PUMP (6 X 6) INCH AT K3.	NOS.	3	"
08-05-00078	- ELECTRICAL DRIVEN PUMP (4 X 4) INCH AT K3	NOS .	10	"
08-05-00079	- FLOW METER (3 X 3) AT K3.	NOS.	10	"
08-05-00080	- SUBMERSIBLE PUMP AT K3.	NOS.	2	"
08-05-00081	- AIR BLOWER AT K3.	NOS.	2	"
08-05-00082	- SLOP / SEWAGE / DRAINAGE UNITS AT K3.	NOS.	5	"
08-05-00083	- AIR HEAT EXCHANGER AT K3.	NOS.	2	"
08-05-00084	- AIR DRYER WITH ELECTRICAL HEATER COMPLETE AT K3.	NOS.	2	"
08-05-00085	- WIRE ROPE (19 MM) AT K3.	METER	1100	"
08-05-00086	- FIRE FIGHTING PUMP AT K3.	NOS.	2	"
08-05-00087	- SPARE PARTS FOR PUMPS & AIR COMPRESSORS AT K3.	LOT	2	"
08-05-00088	- SPARES (MECH. ELECTRICAL , INSTRUMENT) FOR: PROCESS PLANT , PUMPING & DEGASSING STATIONS.	LOT	9	"
08-05-00089	- VARIOUS PIPES , FITTING & VALVES.	KM NOS.	15 700	"
08-05-00090	- SPARES FOR STEAM & GAS TURBINE GENERATORS (ELECTRICAL, INSTRUMENTS) .	LOT	4	"
08-05-00091	- SPARES (MECH.) FOR WATER PUMP STATION (ZAB)	SET	4	"

MINISTRY OF OIL
ESTABLISHMENT NAME: NORTH OIL COMPANY
LOCATION: ALL COMPANY AREAS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00092	- AMBULANCES (COMPANY HOSPITAL & FIRE SERVICE) WITH RECOMMENDED SPARE PARTS	NOS.	4	North Oil Company has it's own hospital and requires ambulances
08-05-00093	- UNIVERSAL FIRE FIGHTING TRUCK (WATER, FOAM, POWDER) WATER - (5000-6000) LT , FOAM COMP - (2000) LT , DRY POWDER - (1000) KG WITH RECOMMENDED SPARE PARTS	NOS.	3	Safety
08-05-00094	- WATER TANK - TRUCK , CAP - (17000) LT, PUMP CAP - (1800) LPM, AT (10) BAR DRIVE P. T. O WITH RECOMMENDED SPARE PARTS	NOS.	2	Safety
08-05-00095	- CRANE 100-120 TONS WITH RECOMMENDED SPARE PARTS	NOS.	2	Maintenance
08-05-00096	- WELDING MACHINES (DIESEL DRIVEN) WITH RECOMMENDED SPARE PARTS	SET	10	Maintenance
08-05-00097	- MOBILE AIR COMPRESSORS DIESEL DRIVEN WITH RECOMMENDED SPARE PARTS	SET	14	Maintenance
08-05-00098	- BULLDOZER WITH RECOMMENDED SPARE PARTS	NOS.	2	Maintenance
08-05-00099	- MECHANICAL SHOVEL WITH RECOMMENDED SPARE PARTS	NOS.	2	Maintenance
08-05-00100	- (1-3) MW ELECTRIC POWER GENERATOR POWERED BY A GAS TURBINE COMPLETE WITH ALL ACCESSORIES (K3) WITH RECOMMENDED SPARE PARTS	SET	1	Maintenance
08-05-00101	- DIESEL DRIVEN GENERATING SETS 50 - 250 KVA. WITH RECOMMENDED SPARE PARTS	SET	4	Maintenance
08-05-00102	- OIL REMOVAL (SKIMMER) , TWO SPEED MODEL, ROTATING OIL DRUM SKIMMER SUPPORTED BY: FLOATS MADE OF LIGHT ALLOY WITH RECOMMENDED SPARE PARTS	NOS.	2	Environmental control
08-05-00103	- DRILLING PIPES THREADING MACHINE. WITH RECOMMENDED SPARE PARTS	NOS.	1	Maintenance
08-05-00104	- EXCAVATOR (HYDRAULIC) WITH RECOMMENDED SPARE PARTS	NOS.	2	Maintenance

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	SPARES REQUIRED FOR THE OVERHAUL OF DEFUNCT FIELD EQUIPMENTS COMPELETE ENGINES FOR :			All items this sector refer to general maintenance and vehicular refurbishment
08-05-00105	- BULLDOZER KOMAT SU D - 155	NOS.	4	"
08-05-00106	- WHEEL LOODER KAWA SAKI 70.B	NOS.	4	"
08-05-00107	- SURFACE GRADER GD 37 - 6 H	NOS.	2	"
08-05-00108	- CRANES TYPES TADANO , KATO & GROVE	NOS.	6	"
08-05-00109	- EXCAVATORS CAT. , MITSUBISHI & MERCEDES	NOS.	10	"
08-05-00110	- LIFTING TRUCK FD 30 & FD 50	NOS.	2	"
08-05-00111	- LORRY : SCANIA , TOYOTA & MERCEDES	NOS.	24	"
08-05-00112	- TRAILER : (LORRY TRUCK & TIP TRUCKS) SCANIA , MERCEDS , NISSAN & HINO	NOS.	50	"
08-05-00113	- HYDRAULIC PLATFORM	NOS.	1	"

ESTABLISHMENT NAME: SOUTH OIL COMPANY
LOCATION : ALL FIELDS
DRILLING & COMPLETION & WORKOVER MATERIALS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00114	- X- MASS TREE	S..S	15	This sector covers the drilling of 15 wells, and perforation of 25 wells for water injection
08-05-00115	- CASING PIPE SIZE (7")	M	20000	"
08-05-00116	- CASING ACCESSORIES	ITEMS	15	"
08-05-00117	- DRILLING BITS	NOS	100	"
08-05-00118	- TUBING 2 7/8 INCH	M	25 000	"
08-05-00119	- TUBING 3 1/2 INCH	M	135 000	"
08-05-00120	- PERMANENT PRODUCTION PACKERS	SETS	85	"
08-05-00121	- CASING PATCHES	SETS	15	"
08-05-00122	- CEMENT RETAINER	SETS	25	"
08-05-00123	- THROUGH TUBING BRIDGE PLUGS (T.B.T.)	SETS	20	"
08-05-00124	- PERFORATION ACCESSORIES	ITEMS	60	"
08-05-00125	- PERFORATION CHARGES	NO.	50 000	"
08-05-00126	- WELLHEAD GATE VALVES OF VARIOUS SIZES	NOS.	150	"
08-05-00127	- CHEMICALS FOR DRILLING & COMPLETION FLUIDS	ITEMS	15	"
08-05-00128	- CHEMICAL ADDITIVES FOR CEMENT	ITEMS	10	"
08-05-00129	- CHEMICAL ADDITIVES FOR ACID	ITEMS	10	"
08-05-00130	- WATER INJECTION PUMPING UNITS C/W RECOMMENDED SPARE PARTS	SETS	5	"
08-05-00131	- ELECTRICAL SUBMERSIBLE PUMPS WITH ACCESSORIES C/W RECOMMENDED SPARE PARTS	SETS	8	"
08-05-00132	- COILED TUBING UNIT AND ACCESSORIES	UNIT	2	"

MINISTRY OF OIL

SHEET NO. 2 OF 25

ESTABLISHMENT NAME: SOUTH OIL COMPANY

LOCATION : ALL FIELDS

RESERVOIR MONITORING AND LABORATORY ANALYSIS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00133	- ACID TRAILER (TO TRANSPORT ACID AND COMPLETION FLUIDS) WITH SPARES	SET	4	All items refer to reservoir maintenance and well workovers
08-05-00134	- ELECTRIC MOTORS FOR MIXING CEMENT WITH SPARES & CONTROLS	SET	20	"
08-05-00135	- TRAILER - MOUNTED WIRELINE UNIT WITH ACCESSORIES AND SPARES	UNIT	3	"
08-05-00136	- LIGHT - WEIGHT LUBRICATOR WITH BOP .	SET	5	"
08-05-00137	- WEIGHT INDICATOR FOR SLICK - LINE .	NOS	10	"
08-05-00138	- EQUIPMENT & ACCESSORIES FOR REPAIR OF LOGGING UNITS .	SET	3	"
08-05-00139	- FIELD LAB . MATERIALS AND EQUIPMENT .	ITEMS	40	"
08-05-00140	- CHEMICALS FOR LAB. ANALYSIS	ITEMS	50	"
08-05-00141	- LABORATORY EQUIPMENT FOR GAS AND CRUDE OIL ANALYSIS	ITEMS	25	"
08-05-00142	- EQUIPMENT FOR GEOLOGICAL LABORATORY	ITEMS	10	"
08-05-00143	- RESERVOIR MONITORING SOFTWARE	SET	5	"

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MINISTRY OF OIL

SHEET NO. 3 OF 25

ESTABLISHMENT NAME: SOUTH OIL COMPANY

LOCATION : ALL FIELDS

SPARE PARTS FOR FIELD EQUIPMENTS AND TRUCKS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00144	- SPARE PARTS FOR WATER INJECTION PUMPING UNITS	ITEMS	350	All items refer to water injection and maintenance
08-05-00145	- SPARE PARTS FOR REPAIR OF ELECTRICAL SUBMERSIBLE PUMPS.	ITEMS	40	"
08-05-00146	- SPARE PARTS FOR DRILLING AND COMPLETION FLUID MIXERS , TANKS	ITEMS	15	"
08-05-00147	- SPARE PARTS FOR ACID STORAGE PLANT AND TRAILER	ITEMS	10	"
08-05-00148	- SPARE PARTS FOR CEMENT STORAGE AND AIR COMPRESSOR AND CEMENT TRAILERS .	ITEMS	15	"
08-05-00149	- SPARE PARTS FOR PUMPING UNITS (ACIDIZING AND CEMENTING) .	ITEMS	150	"
08-05-00150	- SPARE PARTS FOR WELL HEAD GATE VALVES .	ITEMS	150	"

MINISTRY OF OIL SHEET NO.4 OF 25

ESTABLISHMENT NAME:SOUTH OIL CO.

LOCATION :ZUBAIR, NORTH & SOUTH RUMAILA

MAINTENANCE OF PRODUCTION STATIONS (DEGASSING)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00151	- SPARE PARTS FOR INGERSOLL-RAND AIR COMPRESSORS	ITEM	112	All items this section refer to repairs and maintenance to de-gassing stations
08-05-00152	- SPARE PARTS FOR LIESTER DIESEL ENGINES	ITEM	98	"
08-05-00153	- SPARE PARTS FOR MAIN PUMPS (UCP)	ITEM	34	"
08-05-00154	- SPARE PARTS FOR AIR BLOWERS	ITEM	16	"
08-05-00155	- SPARE PARTS FOR EBARA VERTICAL PUMPS	ITEM	105	"
08-05-00156	- SALTY WATER PUMPS, WASH WATER PUMPS RECYCLE PUMPS, RECOVERED OIL VERTICAL PUMPS&SPARE PARTS	ITEM	179	"
08-05-00157	- BACKWASH PUMPS, SLUDGE PUMPS, TRANSFER PUMPS, FEED PUMPS, BOOSTER PUMPS&SPARE PARTS	ITEM	79	"
08-05-00158	- SPARE PARTS FOR WATER INJECTION MAIN PUMPS	ITEM	78	"
08-05-00159	- SPARE PARTS FOR SLOP TANK PUMPS	ITEM	17	"
08-05-00160	- SPARE PARTS FOR RUSTON GAS TURBINES TA-1750	ITEM	28	"
08-05-00161	- SKID MOUNTED AIR COMPRESSORS EACH SKID HAS TWO COMPRESSORS, AIR DRYER&AIR RECIEVER	SET	6	"
08-05-00162	- REPLACEMENT COMPLETE BOOSTER PUMPS&MAIN PUMPS FOR SHAMIAH&QURAINAT MUSHRIF	SET	7	"
08-05-00163	- CHEMICAL INJECTION PUMPS TYPE: SIMPLEX METERING P.P-8-24-156&SPARE PARTS	ITEM	57	"
08-05-00164	- SPARE PARTS FOR CLARIFIER CYCLO DRIVE	ITEM	29	"
08-05-00165	- WORTHINGTON PUMPS TYPE: 4 HNN 143, 2HNN 163, 2WX710, 2WX711&SPARE PARTS	ITEM	96	"
08-05-00166	- SPARE PARTS FOR AIR COMPRESSORS TYPE: T-40 MODEL H25	ITEM	83	"

ESTABLISHMENT NAME:SOUTH OIL CO.

LOCATION :NORTH & SOUTH RUMAILA / BASRAH

MAINTENANCE & REFURBISMENT OF DEGASSING / DESALTING STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00167	- CONTROL INSTRUMENT & SPARES	ITEM	170	Spare parts for degassing stations
08-05-00168	- FIELD INSTRUMENT & SPARES	ITEM	80	Spare parts for degassing stations
08-05-00169	- REPLACEMENT OF CONTROL PANEL OF RUSTON GAS TURBINES	SET	10	Spare parts for control systems for turbines

LOCATION :NORTH & SOUTH RUMAILA / GAS COMPRESSION STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00170	- TURBINE CONTROL SYSTEM & ASSOCIATED INSTRUMENTS	ITEM	30	Control systems for turbines at gas compression stations
08-05-00171	- CONTROL INSTRUMENTS & SPARES	ITEM	100	Control systems for degassing stations

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LOCATION :NORTH & SOUTH RUMAILA & GARMA & WATER INJECTION SYSTEM

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00172	- CLUSTER STATIONS CONTROL SYSTEM & ASSOCIATED INSTRUMENTS	ITEM	60	Control systems for water injection stations
08-05-00173	- FLOWMETERS & ASSOCIATED INSTRUMENTS& MONITORS	SET	75	Measurement systems for water injection stations

LOCATION : ZUBAIR / BASRAH

MAINTENANCE OF PRODUCTION STATIONS (DEGASSING)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00174	- CONTROL INSTRUMNTS & SPARES	ITEM	50	Maintenance and spares for degassing stations
08-05-00175	- FIELD INSTRUMENTS & SPARES	ITEM	150	"
08-05-00176	- CLUSTER STATIONS & SPARES	ITEM	25	"
08-05-00177	- CONTROL & MONITORING INSTRUMENTS FOR CLUSTER MANIFOLDS	SET	3	"

LOCATION :AL -BAKER TERMINAL / BASRAH

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00178	- METERING SYSTEM EQUIPMENT & SPARES	ITEM	25	Refurbishment of fiscalization metering system for crude oil exports
08-05-00179	- CONTROL EQUIPMENT & SPARES	ITEM	25	Spares for control systems for crude oil export

LOCATION :ALL DEPOT , OIL STORAGE DEPOTS, TANKS FARM & PUMP STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00180	- CONTROL INSTRUMENTS & SPARES AT PS1 DEPOT	ITEM	35	Controls and instrumentation for crude oil export
08-05-00181	- FIELD INSTRUMENTS AT PS1 DEPOT	ITEM	30	"
08-05-00182	- CONTROL INSTRUMENTS & SPARES AT ZR1 DEPOT	ITEM	25	"
08-05-00183	- FIELD INSTRUMENTS AT ZR1 DEPOT	ITEM	40	"
08-05-00184	- CONTROL INSTRUMENTS & SPARES AT ZR2 DEPOT	ITEM	20	"

MINISTRY OF OIL

SHEET NO. 7 OF 25

ESTABLISHMENT NAME:SOUTH OIL CO.

LOCATION :NORTH & SOUTH RUMAILA / BASRAH

MAINTENANCE OF DEGASSING STATIONS ELECTRICAL MATERIALS:

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00185	- SPARE PARTS FOR RUSTON GAS TURBINES	ITEM	30	Electrical spare parts for degassing stations
08-05-00186	- ELECTRIC MOTOR &SPARE PARTS	ITEM	15	"
08-05-00187	- SPARE PARTS FOR NEUTRAL EARTHING TRANSFORMER	ITEM	2	"
08-05-00188	- BATTERY CHARGER& SPARE PARTS	ITEM	10	"
08-05-00189	- REPLACEMENT ELECTRIC MOTOR 269 KW	ITEM	3	"

LOCATION :NORTH & SOUTH RUMALA

(DEGASSING STATION UTILITIES)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00190	- AIR COOL- CHILLER CAP. FROM 150 TON TO 180 TON	ITEM	4	Spare parts for degassing stations
08-05-00191	- PACKAGE AIR COOLED A/C DIFFERENT CAPACITY FROM 30 TON TO 60 TON	ITEM	3	"
08-05-00192	- COMPRESSOR FOR CENTER FIUGAL 210 TON A/C UNIT	ITEM	4	"
08-05-00193	- SUBMERSIBLE PUMP FOR SEWAGE STATION DIFFERENT SIZE & CAPACITY FROM 1" TO 8"	ITEM	5	"

LOCATION :ALL DEPOTS

(OIL STORAGE DEPOTS, TANKS FARM&PUMP STATION)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00194	- SPARE PARTS FOR GEC EASI GAS TURBINES AT ZUBAIR	ITEM	176	Spare parts for pumping stations for crude oil exports from the South Region
08-05-00195	- SPARE PARTS FOR MAIN PUMP (UCP) AT ZUBAIR 1	ITEM	32	"
08-05-00196	- SPARE PARTS FOR BOOSTER PUMPS (RUHRPUMPEN) AT ZUBAIR 1	ITEM	31	"
08-05-00197	- TURBINE OIL AERO SHELL 390 (SPECIALISED LUB. OIL FOR R.R. TURBINES.	LITRE	25000	Specialised lubricating oil for Rolls Royce Gas Turbines
08-05-00198	- SPARE PARTS FOR A.A.F. MULTIDUTY AIR FILTERS TYPE D D PANEL	ITEM	9	Spare parts for air purification system

MINISTRY OF OIL
ESTABLISHMENT NAME:SOUTH OIL CO.

SHEET NO. 8 OF 25

LOCATION :ALL DEPOTS
OIL STORAGE DEPOTS, TANK FARMS & PUMP STATIONS
ELECTRICAL MATERIALS:

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00199	- REPLACEMENT OF OLD BATTERY CELLS	SETS	6	Spare parts for gas turbines and cathodic protection
08-05-00200	- SPARE PARTS FOR CATHODIC PROTECTION STATION	ITEM	10	"
08-05-00201	- SPARE PARTS FOR ZUBAIR1 GAS TURBINE	ITEM	20	"
08-05-00202	- SPARE PARTS FOR ZUBAIR2 GAS TURBINE	ITEM	20	"
08-05-00203	- SPARE PARTS FOR ROTORK VALVE	ITEM	20	"
08-05-00204	- SPARE PARTS FOR SOLAR CATHODIC PROTECTION STATION	ITEM	15	"

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LOCATION :ALL DEPOTS
(OIL STORAGE DEPOTS, TANKS FARM & PUMPS STATION)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00205	- CLORINATION WATER TREATMENT	ITEM	1	Drinking water for depots
08-05-00206	- BEARING DIFFERRENT SIZES	ITEM	30	Mechanical spares for pumping station workshops
08-05-00207	- SPECIAL MACHINE & EQUIPMENT FOR REWINDING MOTORS IN THE WORK SHOP	ITEM	7	Mechanical spares for pumping station workshops
08-05-00208	- CLARIFIER & FILTER FOR WATER TREATMENT CAPACITY 100 M3/HR-300M3/HR	ITEM	2	Drinking water for depots

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LOCATION :ALL DEPOTS

OIL STORAGE DEPOTS, TANK FARMS & PUMP STATIONS

ELECTRICAL MATERIALS:

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00209	- CRUDE OIL FLOATING ROOF STORAGE TANK COMPLETE WITH MECHANICAL, ELCTRICAL, CONTROL AND MEASURING EQUIPMENT AND ACCESSORIES, COMPLETE CONSUMABLE MATERIALS FOR ERECTION. FOR PS1 TANK FARM SIZE 82000 M3.	NOS.	2	Construction of storage tanks for crude oil export
08-05-00210	- CRUDE OIL FLOATING ROOF STORAGE TANK COMPLETE WITH MECHANICAL, ELCTRICAL, CONTROL AND MEASURING EQUIPMENT AND ACCESSORIES COMPLETE CONSUMABLE MATERIALS FOR ERECTION. FOR TUBA TANK FARM SIZE 66000 M3	NOS.	4	Construction of storage tanks for crude oil export
08-05-00211	- DESLUDGING EQUIPMENT	SET	2	Construction of storage tanks for crude oil export
08-05-00212	- PORTABLE PUMPS	NOS	30	Construction of storage tanks for crude oil export
08-05-00213	- PIPE LINE COATING MATERIALS	ROLL	3000	Construction of storage tanks for crude oil export
08-05-00214	- EPOXY FOR OIL TANKS	LTR	10000	Construction of storage tanks for crude oil export
08-05-00215	- PORTABLE WELDING MACHINES	NOS.	8	Construction of storage tanks for crude oil export
08-05-00216	- PORTABLE AIR COMPRESSORS	NOS.	4	Construction of storage tanks for crude oil export
08-05-00217	- RUBBER SEALS FOR FLOATING ROOF TANKS & SCRAPER TRAPS	SET	20	Construction of storage tanks for crude oil export

LOCATION : (OIL STORAGE DEPOTS, TANKS FARMS & PUMPS STATIONS/ MESSAN FIELDS)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00218	- OIL HEATER WITH ACCESSORIES	ITEM	2	Refurbishment of oil storage depots
08-05-00219	- SPARES FOR TURBOPUMPS	ITEM	60	Refurbishment of oil storage depots
08-05-00220	- EQUIPMENT FOR TELECOMMUNICATIONS NET WORKS	ITEM	50	Refurbishment of oil storage depots

MINISTRY OF OIL

SHEET NO: 10 OF 25

ESTABLISHMENT NAME: SOUTH OIL COMPANY

LOCATION : ALL FIELDS / BASRAH

MAINT. OF PRODUCTION STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00221	- WELL HEAD EQUIPMENT	SET	200	Maintenance and repair of production stations
08-05-00222	- VALVE AND VALVE SPARE PARTS	NOS	200	"
08-05-00223	- PIPE FITTINGS (ASSORTED CARBON STEEL)	NOS	2000	"
08-05-00224	- WELDING RODS	TON	40	"
08-05-00225	- PIPE CUTTING EQUIPMENT (COLD, HOT CUTTERS & ACCESSORIES)	SET	30	"
08-05-00226	- SHEET & METALLIC GASKETS	SET	50	"
08-05-00227	- TOOLS	SET	30	"

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LOCATION :ALL FIELDS / BASRAH

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00228	- WATER TANKS FOR FIRE FIGHTING	NOS	6	Water tank construction for firefighting

ESTABLISHMENT NAME: SOUTH OIL COMPANY LOCATION : NORTH & SOUTH RUMAILA(GAS COMPRESSION STATIONS)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00229	- SPARE PARTS FOR AIR COMPRESSORS TYPE ORIGIN	ITEM	62	Spares and maintenance for gas compressor stations
08-05-00230	- SPARE PARTS FOR SOLAR GAS TURBINES&GAS OMPRESSORS	ITEM	107	"
08-05-00231	- INGERSOLL-RAND PNEUMATIC MOTORS & SPARE PARTS	ITEM	36	"
08-05-00232	- AIR FILTERS FOR SOLAR GAS TURBINFS	ITEM	2	"
08-05-00233	- HIGH PRESSURE CONDENSATE PUMPS & SPARE PARTS	ITEM	51	"
08-05-00234	- OIL ENTRAINTMENT PUMPS , SLOP TANK PUMPS & SPARE PARTS	ITEM	38	"
08-05-00235	- SPARE PARTS FOR INGERSOLL-RAND AIR COMPRESSORS TYPE :10 T	ITEM	27	"
08-05-00236	- SPARE PARTS FOR HITACHI GAS COMPRESSORS	ITEM	40	"
08-05-00237	- SPARE PARTS FOR GAS COOLERS	ITEM	80	"
08-05-00238	- SPARE PARTS FOR FLOW TANK BLOWERS & BOOSTER BLOWERS	ITEM	60	"
08-05-00239	- REPLACEMENT EMERGENCY SHUT - OFF VALVES FOR FIRST STAGE GAS, COMPLETE WITH RECOMMENDED SPARE PARTS	SET	5	"
08-05-00240	- PORTABLE VIBRATION ANAL YZER COMPLETE WITH ALL ACCESSORIES	SET	3	"
08-05-00241	- SPARE PARTS FOR GLYCOL REGENERATORS	NO	40	"

LOCATION :NORTH & SOUTH RUMAILA :(GAS COMPRESSION STATION)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00242	- COMPRESSORS 7.5 TON, 10 TON ,15 TON	ITEM	15	Equipment and spares for gas compressor stations
08-05-00243	- WATER PUMP FOR CHILLERS (60-80) M3/H &HEAD(40-60) METER	ITEM	2	"
08-05-00244	- WINDING WIRE DIFFERENT GUAGES & CLASSES & INSULATION PAPER	ITEM	20	"
08-05-00245	- TRANSFORMER (COMPLETE)FROM 250 KVA TO 1000 KVA	ITEM	2	"
08-05-00246	- UNIT SUBSTATION FOR DIFFERENT CAP. 11KV-400 V	ITEM	2	"
08-05-00247	- CABLE JOINT DIFFERENT SIZES	ITEM	3	"
08-05-00248	- END BOX HIGH VOLTAGE DIFFERENT SIZES	ITEM	3	"

LOCATION :NORTH&SOUTH RUMAILA/BASRAH
GAS COMPRESSION AND DEGASSING STATIONS
ELECTRICAL MATERIALS:

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00249	- CIRCUIT BREAKER, CONTACTOR & SPARE PARTS	ITEM	40	Electrical spare parts for gas compression and degassing stations
08-05-00250	- U.P.S. UNIT & SPARE PARTS	ITEM	10	"
08-05-00251	- CABLE JOINT S,H.T &L.T	ITEM	25	"
08-05-00252	- LAMPS(HIGH PRESSURE SODIU.M)	NO	1000	"
08-05-00253	- LOW&HIGH VOLTAGE CABLES	ITEM	25	"
08-05-00254	- SPARE PARTS FOR DIESEL ENGINE	ITEM	10	"
08-05-00255	- SPARE PARTS FOR MOTOR	ITEM	20	"

LOCATION :NORTH&SOUTH RUMAILA/BASRAH
MAINTENANCE OF COMPRESSION STATIONS
ELECTRICAL MATERIALS

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CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00256	- REPLACEMENT ELECTRIC MOTOR 1900 KW 6.6 KV	ITEM	2	Electrical spare parts for gas compression stations
08-05-00257	- SPARE PARTS OF ELECTRIC VALVES	ITEM	15	Electrical spare parts for gas compression stations
08-05-00258	- ELECTRIC MOTORS &SPARE PARTS	ITEM	25	Electrical spare parts for gas compression stations

LOCATION :ALL FIELDS / BASRAH
PRODUCTION CHEMICALS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00259	- ZINC SULPHATE(ZNSO4.7H2O)FOR WATER INJECTION	TON	300	Chemicals for water injection plants
08-05-00260	- POLY ACRYL AMIDE FOR WATER INJECTION	TON	24	Chemicals for water injection plants
08-05-00261	- LAB. CHEMICAL	ITEM	30	Chemicals for analytical purposes
08-05-00262	- LAB APPARATUS	NOS	15	Apparatus for analytical purposes

FIRE FIGHTING & SAFETY EQUIPMENTS & MATERIALS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00263	- FIRE FIGHTING TRUCKS	NOS	3	Fire fighting equipment
08-05-00264	- FIRE FIGHTING EQUIPMENTS	NOS	400	"
08-05-00265	- FIRE EXTINGUISHERS	NOS	100	"
08-05-00266	- FOAM PROPORTIONATING BLADDERS	NOS	12	"
08-05-00267	- BALL VALVES FOR FOAM SYSTEM	NOS	50	"
08-05-00268	- BREATHING AIR CHARGING UNIT	NOS	2	"
08-05-00269	- PERSONNAL SAFETY EQUIPMENTS	NOS	355	"

LOCATION :ALL SITES HEAVY TRUCKS & EQUIPMENT

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00270	- CRANE 80-100 TON 8-CYL INDER DIESEL L.H.D.	NOS	2	Equipment and Spare parts for heavy engineering
08-05-00271	- CRANE 30 TON 4- WHEEL DRIVE, 4- WHEEL STEERING	NOS	3	"
08-05-00272	- FORK LIFT 3 TON 4 CYL. WITH RECOMMENDED SPARE PARTS	NOS	8	"
08-05-00273	- FORK BARELL LIFT 2 TON WITH RECOMMENDED SPARE PARTS	NOS	4	"
08-05-00274	- SPARE PARTS FOR HEAVY EQUIPMENT	ITEM	300	"
08-05-00275	- SPARE PARTS FOR LIGHT EQUIPMENT	ITEM	300	"
08-05-00276	- WORK SHOP EQUIPMENT	ITEM	40	"
08-05-00277	- SPECIALISED SERVICE TRUCKS FOR OIL FIELD OPERATIONS	NO	10	"

MINISTRY OF OIL
ESTABLISHMENT NAME:SOUTH OIL CO.
LOCATION :SOUTH RUMAILA / GARMA WATER INJECTION SYSTEM

ELECTRICAL MATERIALS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00278	-REPLACEMENT ELECTRIC MOTORS	ITEM	5	Electrical equipment for water injection systems
08-05-00279	- SPARE PARTS FOR EXCITER	ITEM	30	"
08-05-00280	- REPLACEMENT ELECTRIC MOTOR 2500 KW	ITEM	3	"

LOCATION : RUMAILA - HADITHA PIPE LINE & STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00281	- SPARE PARTS FOR OIL MAIN PUMPS & G.E GAS TURBINE	SET	6	Spare parts for pumping stations
08-05-00282	- SPARES PARTS FOR COMMUNICATION SYSTEM	SET	15	"

LOCATION : REPAIR OF DEEP SEA TERMINALS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00283	- ELECTRICAL INSTALLATIONS: MCC, SWITCH GEAR, ACCESSORIES	ITEM	20	Spare parts for al-Amayah loading terminal
08-05-00284	- MECHANICAL EQUIPMENTS: PUMPS,VALVES, GENERATORS, ACC . TELESCOPIC GANGWAY COMPLETE WITH ALL ACCESSORIES	ITEM	40	"
08-05-00285	- EQUIPMENT FOR REPAIR&COMPLETION OF EMCOWHEATON LOADING ARMS	ITEM	70	"
08-05-00286	- CONTROL INSTRUMENTS	ITEM	36	"
08-05-00287	- MISC. FITTINGS AND ACCESSORIES	ITEM	100	"

LOCATION : AL BAKER TERMINAL

CODE	ITEM DESCRIPTION	UNIT	QTY	
08-05-00288	- SPARES FOR SEA CHANNEL DREDGERS	ITEM	100	Spare parts for Mina al-Bakr loading terminal
08-05-00289	- MOORING BOAT WITH SPARES&ACCESSORIES	NO.	4	"
08-05-00290	- MEASURMENT INSTRUMENTS FOR ENVIRONMENT PROTECTION	ITEM	25	"

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00291	- SPARE PARTS FOR LOADING ARMS	ITEM	30	Spare parts for Mina al-Bakr loading terminal
08-05-00292	- SPARES PARTS FOR M.V. SWITCH GEAR STATION	ITEM	20	Spare parts for Mina al-Bakr loading terminal

LOCATION : BASRAH
(AL BAKER TERMINAL)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00293	- SPLIT AIR CONDITION 1.5 TON	ITEM	1	Spare parts for Mina al-Bakr loading terminal
08-05-00294	- SPLIT AIR CONDITION 2 TON	ITEM	1	Spare parts for Mina al-Bakr loading terminal

LOCATION : (AL BAKER TERMINAL)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00295	- SPARE PARTS FOR CATERPILLAR DIESEL ENGINES	ITEM	150	Spare parts for Mina al-Bakr loading terminal
08-05-00296	- SPARE PARTS FOR PEERLESS FIRE FIGHTING PUMPS	ITEM	40	"
08-05-00297	- SPARE PARTS FOR CAPSTANS	ITEM	16	"
08-05-00298	- SPARE PARTS FOR SLOP TANK&SURGE TANK MIXERS	ITEM	47	"

LOCATION :NORTH & SOUTH RUMAILA FIELD ZUBAIR BAB-AL ZUBAIR CENTER

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00299	- TELECOMMUNICATION SYSTEM & EQUIPMENT TO REPLACES DAMAGED OR OBSOLETE SYSTEMS	ITEM	70	Replacement telecommunications system for South Area

LOCATION :ALL FIELDS
SERVICE CONTRACTS.

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00300	- COILED TUBING SERVICES FOR WORKOVER AND STIMULATION			Service contract for production well workovers
08-05-00301	- OPEN AND CASED HOLES LOGGING SERVICES.			Service contract for production well workovers
08-05-00302	- REPAIR OF DAMAGED COILED TUBING UNIT			Spare parts for well workover equipment

LOCATION :SERVICE CONTRACTS/BASRAH

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00303	-CONTRACT FOR CUSTODY METER CERTIFICATION		1	Service contract for meter proving at Mina al-Bakr terminal

MINISTRY OF OIL

ESTABLISHMENT NAME: SOUTH OIL COMPANY

SHEET NO:17 OF 25

LOCATION : ZUBAIR, NORTH & SOUTH RUMAILA

SERVICE CONTRACTS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00304	- TO OVERHAUL 2 NOS. ROLLS ROYCE AVON 1533/75 G AT ZUBAIR 1(ABROAD)			Continuation of overseas overhauls commenced in Phase 4
08-05-00305	- TO OVERHAUL 2 NOS. ROLLS ROYCE AVON 1534/101G AT PSI (ABROAD)			Continuation of overseas overhauls commenced in Phase 4
08-05-00306	- TO REFURBISH ROTORS & STATORS FOR RUSTON TA-1750 GAS TURBINE (4) NOS. (ABROAD)			Continuation of overseas overhauls commenced in Phase 4

LOCATION :ALL FIELD (RUMAILA, ZUBAIR, MISSAN)

MATERIAL AND EQUIPMENT FOR OIL FLOW LINE

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00307	- LINE PIPES 6 DIAMETER POLY PROPYLENE COATED WITH SUITABLE SHRINCKABLE SLEEVES ACCORDING TO API-5LX	KM	150	Repairs to flow line production systems
08-05-00308	- LINE PIPE 8 DIAMETER POLY PROPYLENE COATED WITH SUITABLE SHRINCKABLE SLEEVES ACCORDING TO API-5LX	KM	100	"
08-05-00309	- VALVES CLASS 900 AND FLANGES	NO	800	"
08-05-00310	- FITTING (ELBOWS, TEES , COUPLING)	NO	400	"
08-05-00311	- PRESSURE AND TEMPRETURE GAUGES AND VALVES	NO	150	"
08-05-00312	- WELDING RODS	TON	10	"
08-05-00313	- GRINDING WHEELS	NO	1000	"
08-05-00314	- WELDING SETS AND HANDLING EQUIPMENT	SET	6	"
08-05-00315	- SERVEYING EQUIPMENTS AND ACCESSORIES	SET	10	"
08-05-00316	- XRAY FILMS AND SOLUTION	LOT	10	"

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MINISTRY OF OIL

SHEET NO. 18 OF 25

ESTABLISHMENT NAME:SOUTH OIL COMPANY

LOCATION :WEST QURNA DG 8

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00317	PRODUCTION BANK CONSISTS OF THREE GAS/OIL SEPARATION STAGES OF 40000 BID CAPACITY COMPLETE WITH ALL COMPLEMENTARY SYSTEMS INCLUDING: INSTRUMENTATION AND CONTROL SYSTEM , INTERCONNECTION PIPING AND VALVE , FITTING SYSTEM , FIRE FIGHTING SYSTEM , PUMPING & MANIFOLDS	SET	12	Gas/Oil separation units to increase production at DG-8
08-05-00318	- OIL FLOW LINES	KM	60	"
08-05-00319	DEHYDRATION / DESALTING UNITS FOR HEAVY CRUDE OIL TREATMENT OF 40000 B/D DRY CRUDE CAPACITY INCLUDING : DEHYDRATION DESALTER , ELECTROSTATIC VESSELS , SETTLERS , DEGASSERS COMPLETE WITH INTERNAL AND EXTERNAL ACCESSORRIES , PUMPS SKIDS FOR FRESH WATER , RECYCLE WATER , EFFLUENT WATER COMPLETE PACKAGE OF INSTRUMENTATION AND CONTROL SYSTEM - COMPLETE ELECTRICAL SYSTEM/ INTER CONNECTING PIPING AND FITTINGS/ SPARE PARTS FOR TWO YEARS	UNIT	2	Dehydration and desalting units to increase production
08-05-00320	- COMPLETE ELECTRICAL FEEDING AND DISTRIBUTION SYSTEM INCLUDING CONDUCTORS AND TOWERS , TRANSFORMERS , SWITCH GEARS MCCS , BATTERY CHARGER CABLINGS AND ALL ACCESSORIES	SET	1	Related equipment to above project
08-05-00321	- SERVICE AND HANDLING EQUIPMENTS	SET	5	"
08-05-00322	- GLYCOL REGENERATION UNIT COMPLETE WITH PUMPS INSTRUMENTS CONTROLS , ELECTRICAL , VALVES , FITTINGS &ACCESSORIES	UNIT	2	"
08-05-00323	- EMERGENCY DIESEL GENERATORS	SET	2	"

MISTRY OF OIL
ESTABLISHMENT NAME:SOUTH OIL COMPANY
LOCATION :WEST QURNA DG 7

SHEET NO:19 OF 25

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00324	CRUDE OIL SURFACE FACILITES AND COMPLEMENTARY SYSTEM FOR PRODUCTION INCLUDING : - OIL PRODUCTION BANK OF 40000 B/D CAPACITY OF THREE GAS/OIL SEPARATION STAGES . COMPLETE WITH ALL COMLEMENTARY SYSTEM AND ACCESSORIES WHICH CONSIST OF PRODUCTION SEPARATORS , INSTRUMENTATION AND CONTROL SYSTEM , INTERCONNECTION PIPING, . . . ETC.	SET	30	Gas/Oil separation units to increase production at DG-7
08-05-00325	- COMPLEMENTARY EQUIPMENT AND DEVICES FOR FLOW TANKS , PUMPING STATION , FIRE FIGHTING SYSTEM , TELECOMMUNICATION SYSTEM , INSTRUMENT AIR SYSTEM , AND FLOW LINE FOR PRODUCTION WELL AND FIELD MANIFOLD SYSTEM INCLUDING PIPING AND FITTING	SET	6	Associated equipment required for completion of above project
08-05-00326	- COMPLETE ELECTRICAL FEEDING SYSTEM INCLUDING COPPER OR ALUMINUM CONDUCTORS , TOWERS AND INSULATORS , TRANSFORMERS , SWITCH GEARS , PMCCS , CABELLINGS AND ALL ACCESSORIES	SET	3	"
08-05-00327	- SERVICES AND HANDLING EQUIPMENT	SET	4	"
08-05-00328	- GLYCOL REGENERATION UNIT COMPLETE WITH PUMPS INSTRUMENTS CONTROLS , ELECTRICALS , VALVES , FITTINGS & ACCESSORIES	UNIT	2	"
08-05-00329	- EMERGENCY DIESEL GENERATORS	SET	2	"

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LOCATION :WEST QURNA

DEVELOPMENT OF WEST QURNA OIL FIELD FOR
EARLY PRODUCTION OF DEGASSING STATION NO . 6

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00330	- COMPLETE PACKAGES OF DEGASSING STATION PUMPING ABD TRANPORTATION FACILITIES OF DGS 6 IN WEST QURNA OIL FIELD INCLUDING DEGASSING BANK OF 60000 B/D CAPACITY WITH ALL NECESSARY COMPLEMENTARY SYSTEMS, COMPLTE ELECTRICAL FEEDING AND DISTRIBUTION SYSTEMS, FLOW	set	1	Degassing equipment for DG-6 to increase production

LOCATION :FIRST STRATEGIC TRANSPORTATION PIPE LINE

MATERIALS FOR REFERPISHMENT OF DAMAGED SECTIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00331	- COATED PIPE LINES OF 42" DIAMETER COMPLETE WITH SHRINKABLE SLEEVES ACCORDING TO API 5 LX	METER	2000	Repairs to Strategic Pipeline to allow export of oil from South to North via Kirkuk
08-05-00332	- WELDING RODS,AND CONSUMABLES	TON	4	"
08-05-00333	- COAL TAR AND PRIMER	M3	1000	"
08-05-00334	- PVC TAPES	M2	2000	"
08-05-00335	- SERVICE AND HANDLING EQUIPMENT.	SET	8	"
08-05-00336	- GRINDING WHEEL	NO	2000	"

MINISTRY OF OIL

SHEET NO:21 OF 25

ESTABLISHMENT NAME: SOUTH OIL COMPANY

LOCATION :GARMAT ALI

SEPARATE SYSTEM FOR INDUSTRIAL WATER FACILITIES

AT GARMAT ALI WATER INJECTION PURIFICATION-SITE

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00337	-INDUSTRIAL WATER FILTERATION AND PUMPING STATION FOR OIL FIELD UTILIZTION (WET CRUDE OIL DEHY/DESAL UNIT . FIRE FGHTING SYSTEM AND DOMESTIC SERVICE, THE SYSTEM INCLUDES COMPLETE SET OF PUMPING STATION OF DISCHARGE CAPACITY OF 2400 M/HR AND BANKS OF WATER FILTERS COMPLETE WITH ALL ELECTRICAL SYSTEM, INSTRUMENTATION AND CONTROL, INTERCONNECTING PIPING WITH VALVES AND FITTING WITH ALL NECESSARY ACCESSORIES .	SET	10	Water injection system purification site equipment

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MINISTRY OF OIL

SHEET NO:22 OF 25

ESTABLISHMENT NAME: SOUTH OIL COMPANY

LOCATION :SOUTH RUMAILA

WATER INJECTION REFERBISHMENT OF ELECTRICAL AND CONTROL SYSTEM OF CLUSTER PUMPING STATION (CPS 10)

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	- ELECTRICAL & INSTRUMENT MATERIALS TO REPLACE DAMAGED& MISSING ITEMS OF CLUSTER PUMPING STATION AT SOUTH RUMAILA OIL FIELD INCLUDING :			Refurbishment of water injection sites
08-05-00338	- ELECTRICAL MEDIUM VOLTAGE SWITCHGEAR BOARD COMPLETE WITH PROTECTION	SET	5	"
08-05-00339	- LOW VOLTAGE SWITCHGEAR BOARD COMPLETE WITH PROTECTION	SET	5	"
08-05-00340	- POWER MOTOR CONTROL CENTER (PMCC)	SET	2	"
08-05-00341	- TRANSFORMERS (POWER + ZIG-ZAG)	NO	8	"
08-05-00342	- THYRISTOR EXCITER PANELS	NO	480	"
08-05-00343	- BATTERY CHARGER (220 VOLT, 110 VOLT, 24VOLT)	NO	8	"
08-05-00344	- SETS OF PROTECTION BATTERIES	SET	4	"
08-05-00345	- LOCAL CONTROL BOARDS	SET	4	"
08-05-00346	- MOTORIZED VALVES & ACTUATORS	SET	8	"
08-05-00347	- CABLES WITH ALL NECESSARY ACCESORIES	METER	8000	"
08-05-00348	- PROTECTIVE RELAYS FOR MODIFICATION OF 132 KV CONTROL PANEL	SET	8	"
08-05-00349	- AIR CONDITIONING UNIT (10 TONS)	NO	2	"
08-05-00350	- RECOMMENDED SPARE PARTS	SET	8	"
08-05-00351	- COMPLETE PACKAGE OF CONTROL & INSTRUMENT SYSTEM WITH ACCESSORIES	SET	2	"

ESTABLISHMENT NAME:SOUTH OIL CO.

LOCATION :ZUBAIR MISHRIF/ ZUBAIR OIL FIELD/ZUBAIR MISHRIF DEGASSING ST./HAMMAR MISHRIF DEGASSING ST. /WET CRUDE OIL TREATMENT FCILITIES

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00352	DEHYDRATION/DESALTING UNITS WITH COMPLEMENTRY SYSTEM FOR ZUBAIR MISHRIF AND HAMMAR MISHRIF DEGASSING STATIONS OF 40000 B/DAY DRY CRUDE EACH INCLUDING: - DESIGN AND DETAILED ENGINEERING DRAWING. - PROCUREMENT OF EQUIPMENT AND MATERIALS, DELIVERY OF EQUIPMENTS AND MATERIAL CIF UM QASSER. SUPERVISION OF INSTALLATION AND TECHNICAL ASSISTANCE DURING FIELD CONSTRUCTION. ERECTION, TESTING AND COMMISSIONING, EACH UNIT INCLUDES THE FOLLOWING. - ELECTROSTATIC DEHY/DESALTER VESSELS WITH CORRESPONDING DEGASSERS COMPLETE WITH INTERNAL AND EXTERNAL ASSEMBLIES. - PUMP SKIDS FOR WASH WATER, RECYCLE WATER, EFFLUENT WATER, DEOILED WATER COMPLETE WITH INTER CONNECTING PIPING. - CHEMICAL INJECTION PUMPING PACKAGES FOR, DEMULSIFIER, DESCALER AND CORROSSION INHIBITOR. - EFFLUENT WATER TREATMENT UNIT COMPLETE WITH INTERNAL ASSEMBLY. - COMPLETE PACKAGE INSTRUMENTATION WITH CONTROL SYSTEM BOTH LOCAL AND REMOTE (CONTROL ROOM-PANEL). - ELECTRICAL SYSTEM INCLUDING POWER GRID TRASFORMERS, CABLING, PMCCS,LIGHTING AND ACCESSORIES. - INTER CONNECTING PIPING SYSTEM WITH ALL NECESSARY VALVES AND FITTING WITH CONSUMABLE MATERIALS. - ALL AUXILIARY SYSTEM (RELIEF,DRAIN,ASSOCIATED GAS, MIXING DEVICES) - RECOMMENDED SPARE PARTS FOR TWO YEARS OF OPERATION	UNIT	4	Equipment and spare parts for production water removal, to boost production

MINISTRY OF OIL

ESTABLISHMENT NAME:SOUTH OIL CO.

SHEET NO. 24 OF 25

LOCATION : FLOW AND BAD OIL TANKS FOR SOUTH RUMAILA OIL FIEID DEGASSING STATIONS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00353	FLOW TANKS 5000 M³ CAPACITY FOR SHAMIYA AND QURAINAT MISHRIF DEGASSING STATION COMPLETE WITH ALL INTERNAL AND EXTERNAL ACCESSORIES. THE TANKS SHALL INCLUDE : - INLET,OUTLET,RECYCLE,DRAIN NOZZLES WITH SUITABLE MOTORIZED VALVES AND FITTING. - COMPLETE PACKAGE OF INSTRUMENTATION AND CONTROL SYSTEM WITH ALL ACCESSORIES CABLING...ETC - COMPLETE ARRESTOR, EARTHING AND LIGHTING SYSTEM. - FIRE FIGHTING SENSING AND ACTUATING SYSTEM WITH COOLING WATER AND FOAM SYSTEM. - INTER CONNECTING PIPING,VALVES AND FITTING. - INTERNAL E-POXY COATING AND OUTSIDE PAINTING. - ALL CONSUMABLES REQUIRED FOR LOCAL CONSTRUCTION OF THE TANKS WITH WELDING SETS.	NOS.	2	Equipment to construct flow tanks, bad oil tanks (slops) and associated equipment for the movement, storage and pumping of same
08-05-00354	BAD OIL TANK FOR TEMPORARY BAD CRUDE OIL STORAGE IN CASE OF BAD OPERATION OF DEHYDRATION/DESALTING UNITS, 700 M WITH ALL INTERNAL AND EXTERNAL ACCESSORIES, TO BE INSTALED IN JANUBIA, RUMAILA, RATGA,QURAINAT AND SHAMIYA DEGASSING STATIONS - EACH TANK SHALL BE EQUIPED WITH PUMPING GRID FOR REPUMPING THE BAD OIL BACK TO THE INLET OF EXISTING DEHY/DESALTING UNITS. WITH ALL NECESSORY INTERCONNECTING PIPING AND MOTORIZED VALVES...ETC	NOS.	6	

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	- COMPLETE FILTERATION AND DISTRIBUTION PIPING ARRANGEMENT FOR WATER INJECTION DESTRIBUTED IN THREE CLUSTER PUMPING STATION EACH FILTERATION SET HAVING 750 M/HR WATER CAPACITY ANDCONSISTS OF:			Parts for completion of water injection system
08-05-00355	FILTERATION SYSTEM -THREE SKID MOUNTED PRESSURIZED MULTI-MEDIA FILTER VESSELS EACH OF 250 M/HR WITH WATER OUTLET PARTICLE SIZE OF NOT MORE THAN (4) MICRONS - INTER CONNECTING PIPING WITH VALVES AND FITTINGS . - BACK WASHING SYSTEM COMPLETE WITH COMPRESSED AIR SYSTEM, PUMPS SKIDS, VALVES AND FITTINGS. - COMPLETE PACKAGES OF INSTRUMENTATION AND CONTROL SYSTEM WITH REMOTE CONTROL PANEL .	SET	3	"
08-05-00356	WATER INJECTION MANIFOLD CONSISTING OF : - WATER INJECTION HEADER WITH DESIGN PRESSURE OF 210 KG/CM^2 AND INCLUDING (14) BRANCH OUTLETS OF 6" DIA. COMPLETE WITH ALL NECESSARY VAALVES AND FITTINGS,FLOWMETERS,PRESSURE AND TEMPERATURE INDICATORS AND CONTROL SYSTEM. - OIL PRODUCTION HEADER WITH DESIGN PRESSURE OF 150 KG/GM AND CONSISTS OF (14) BRANCH OUTLETS OF 6' DIAMETER COMPLETE WITH ALL NECESSARY VALVES AND FITTING FOR OIL PRODUCTION OF INJECTION WELLS PRIOR TO WATER INJECTION.	SET	3	"
08-05-00357	- INTER CONNECTING PIPING SYSTEM BETWEEN THE EXISTING PUMPING STATION AND THE PROPOSED FILTERATION AND MANIFOLD SYSTEM COMPLETE WITH MOTORIZED VALVES PIPES&FITTINGS.	SET	3	"
08-05-00358	- FLOW LINE PIPES OF 6"+4" DIAMETER, PVC OUT SIDE COATED WITH SUITABLE SHRICKABLE SLEEVES	KM	150	"
08-05-00359	- VALVES CLASS 1500 AND 900, FLANGES, GASKETS, ELBOWS, TEES, STUD BOLTS, AND ANY OTHER NECESSARY FITTINGS.	LOT	LOT	"

MINISTRY OF OIL

ESTABLISHMENT NAME:IRAQ DRILLING CO.

LOCATION :BASRAH AND KIRKUK

SHEET NO: 1 OF 2

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00360	- SPARES FOR (SIX) OIL WELL RIGS	NOS.	20 000	Spares for 20 drilling and workover rigs in both North and South regions
08-05-00361	- SPARES FOR (ONE) C.131 RIG	.NOS	4 000	"
08-05-00362	- SPARES FOR (THREE) EMSCO RIG	NOS.	5 000	"
08-05-00363	- SPARES FOR (TWO) P80 RIGS	.NOS	2 000	"
08-05-00364	- SPARES FOR (SIX) IDECO RIGS	NOS.	8 000	"
08-05-00365	- SPARES FOR (ONE) CARIER RIGS	.NOS	1 000	"
08-05-00366	- SPARES FOR (ONE) CABOT RIG	NOS.	5 000	"

MINISTRY OF OIL
ESTABLISHMENT NAME:IRAQ DRILLING CO.
LOCATION :BASRAH AND KIRKUK

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00367	- AMBULANCE	NOS.	8	Spares, equipment and safety items related to drilling 20 new wells in previous section
08-05-00368	- LOW LOADERS 50 TONS	.NOS	8	"
08-05-00369	- CRANES 20 TONS	NOS.	6	"
08-05-00370	- FORKLIFTS 5 TONS	.NOS	2	"
08-05-00371	- MOBILE WORKSHOP	NOS.	2	"
08-05-00372	- WELDING MACHINE	.NOS	6	"
08-05-00373	- TYRES & TUBES FOR HEAVY LOADERS	NOS.	600	"
08-05-00374	- AIR COMPRESSORS	.NOS	10	"
08-05-00375	- MUD PUMPS	NOS.	6	"
08-05-00376	- ENGINES FOR HEAVY VEHICLES	.NOS	20	"
08-05-00377	- SPARES FOR HEAVY VEHICLES	NOS.	5 000	"
08-05-00378	- DRILL PIPE & DRILL COLLARS	.NOS	1 000	"
08-05-00379	- HAND TOOLS & WORKSHOP EQUIPMENT	NOS.	1 000	"
08-05-00380	- SAFETY & FIRE EQUIPMENT	.NOS	6 000	"
08-05-00381	- DRILLING CAMPS FOR 80 PERSONS	NOS.	2	"
08-05-00382	- LABORATORIES FOR MUD QUALITY CONTROL	.NOS	2	"
08-05-00383	- COMMUNICATION RADIO LINK BETWEEN SITES & BASE	LINK	1	"

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MINISTRY OF OIL SHEET NO. 1 OF 12

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

INSPECTION EQUIPMENTS , MATERIALS & TOOLS .

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00384	- X-RAY EQUIPMENT	SET	2	Non destructive testing equipment and materials
08-05-00385	- ACCESSORIES OF RADIOGRAPHIC INSPECTION OF WELDED JOINTS (FILMS, CHEMICALS , SAFETY EQUIPMENT)	ITEM.	20	"
08-05-00386	- ULTRASONIC THICKNESS METER FLOW DETECTOR WITH PROBES , TEST BLOCK AND OTHER ACCESSORIES	ITEM.	4	"
08-05-00387	- DYE PENETRATION MATERIALS	SET.	100	"
08-05-00388	- COATING & PAINT INSPECTION UNITS (HOLIDAY DETECTOR & THICKNESS GAUGE)	ITEM.	3	"
08-05-00389	- PORTABLE HARDNESS TESTER	NO.	1	"
08-05-00390	- WELD SEAM VACUUM TEST DEVICE	NO.	10	"
08-05-00391	- ISOTOPE SOURCES .IR 192 (40-100) CURIES.	NO.	4	"

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ENGINEERING OFFICES

DESIGN OFFICE REQUIREMENTS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00392	- LATEST ENGINEERING STANDARDS ON C.D. ROMS (API,ASTM,ASME,ANSI,NFPA , ACI, IEC, ASHRE,AASHO,AWWA,CCITT, ETC) .	SET.	2	Office equipment, software for quality control
08-05-00393	- ENGINEERING DESIGN SOFTWARE (PROCESS, EQUIPMENT,PIPING, INSTRUMENTATION, ELECTRICAL,CIVIL WORK & ARCHIVE SOFTWARE) .	SET.	1	"
08-05-00394	- PROJECT MANAGEMENT SOFTWARE (COSTING,SCHEDULING,QUALITY, ENVIRONMENTAL & CONTRACT)	SET	1	"
08-05-00395	- PHOTOCOPYING MACHINE FOR DRAWING UP TO (A0) SIZE	NO.	1	"

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DESIGN OFFICE REQUIREMENTS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00396	- SCANNER SIZE (A0) COMPATIBLE TO PC . RESOLUTION MIN. 600X600 AND RESTER TO VECTOR SOFTWARE .	NO.	1	Office equipment, for quality control
08-05-00397	- PORTABLE TEST EQUIPMENT AND INSTRUMENTS (AVOS,CLAMP AMMETERS , AIR FLOW METERS , VIBRATION METERS, EARTH RESISTANCE METER , ETC.)	NO.	10	Electrical testing equipment
08-05-00398	- MULTI FUNCTION TEST INSTRUMENT FOR CATHODIC PROTECTION SYSTEM.	NO.	1	Electrical testing equipment

MINISTRY OF OIL
ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)
LOCATION : BAGHDAD WORK SHOP FABRICATION AND MAINTENANCE SHOP FOR OIL STORAGE TANKS AND HEAT EXCHANGERS

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00399	- PORTABLE FLAME CUTTING MACHINE COMPLETE WITH RAILS 4 METER LENGTH	SET.	4	Cutting and plate treatment equipment for workshops
08-05-00400	- ELECTRICAL SECTION BENDING MACHINE UP TO 200 mm SECTION	NO.	1	"
08-05-00401	- HYDRAULIC SHEET-CUTTING MACHINE 25 mm x 3000 mm	NO.	1	"
08-05-00402	- HYDRAULIC SHEET-BENDING MACHINE 25mm x 3000 mm	NO.	1	"
08-05-00403	- FOUR-CYLINDER PLATE ROLLING MACHINE WITH AUTOMATIC CONTROL SYSTEM 25 mm x 3000 mm.	NO.	1	"
08-05-00404	- HYDRAULIC TUBE BENDING MACHINE 42 mm x 4 mm	NO.	1	"
08-05-00405	- HYDRAULIC TUBE BENDING MACHINE 60 mm x 5 mm	NO.	1	"
08-05-00406	- ELECTRICAL HYDRAULIC PIPE BENDING MACHINE UP TO 165 mm x 12 mm	NO.	1	"
08-05-00407	AUTOMATIC MACHINE FOR SHEET CUTTING (OXYGEN + LPG) WITH FIVE TORCHES BED DIMENSION 3000mm x 10000mm TO CUT UP TO 125mm THICKNESS .	NO.	1	"

MINISTRY OF OIL

SHEET NO. 5 OF 12

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : BAGHDAD WORK SHOP

FABRICATION AND MAINTENANCE SHOP FOR
OIL STORAGE TANKS AND HEAT EXCHANGERS

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00408	- COLUMN AND BOOM TYPE SUBMERGED ARC WELDING MACHINE (BOOM LENGTH 5m) RATED INPUT POWER 1000 KVA	NO.	2	General workshop equipment
08-05-00409	- AUTOMATIC SHEET DRILLING MACHINE TABLE DIMENSION 1500MM x 1500MM	NO.	1	"
08-05-00410	- ELECTRICAL HORIZONTAL BAND SAW 2000mm x 2000mm	NO.	1	"
08-05-00411	- ELECTRICAL TUBE EXPANDING MACHINE 42 mm	NO.	2	"
08-05-00412	- ELECTRICAL TUBE EXPANDING MACHINE 60 mm	NO.	2	"
08-05-00413	- AUTOMATIC TUBE - TUBE SHEET WELDING MACHINE .40 TO 60 mm DIA.	NO.	1	"
08-05-00414	- SPARE PARTS FOR ALL ABOVE MACHINES .	ITEM.		"

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ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

HEAVY CONSTRUCTION EQUIPMENT .

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00415	- CRANES HYDRAULIC TRUCK MOBILE 25 TONS WITH RECOMMENDED SPARE PARTS	NO.	4	Heavy construction equipment
08-05-00416	- CRANES HYDRAULIC TRUCK MOBILE 50 TONS WITH RECOMMENDED SPARE PARTS	NO.	3	"
08-05-00417	- CRANES HYDRAULIC TRUCK MOBILE 80 TONS WITH RECOMMENDED SPARE PARTS	NO.	1	"
08-05-00418	- CRAWLER HYDRAULIC EXCAVATORS WITH DIESEL ENGINE (239) hp. WITH 1.0 Cu.M BUCKET SIZE WITH RECOMMENDED SPARE PARTS	NO.	6	"
08-05-00419	- LORRY WITH CRANE 5 TON WITH RECOMMENDED SPARE PARTS	NO.	3	"
08-05-00420	- TIPPER (DUMP TRUCKS) (6 x 4) WITH RECOMMENDED SPARE PARTS.	NO.	6	"
08-05-00421	- DRINKING WATER TANKER 13 Cu.M CAPACITY WITH RECOMMENDED SPARE PARTS.	NO.	3	"
08-05-00422	- FUEL TANKER 13 Cu.M CAPACITY WITH RECOMMENDED SPARE PARTS.	NO.	3	"
08-05-00423	- LUBRICATING TRUCK WITH RECOMMENDED SPARE PARTS.	NO.	2	"

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

HEAVY CONSTRUCTION EQUIPMENT

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00424	- TRACK - TYPE TRACTORS (BULLDOZER) WITH RATED ENGINE kw (123) D6 WITH RECOMMENDED SPARE PARTS	NO.	5	Construction equipment
08-05-00425	- TRACK - TYPE TRACTORS (BULLDOZER) WITH RATED ENGINE kw (160) D7 WITH RECOMMENDED SPARE PARTS	NO.	3	"
08-05-00426	- WHEEL LOADER WITH HYDRAULIC DRIVE WITH (230 ~ 250) hp WITH RECOMMENDED SPARE PARTS.	NO.	5	"
08-05-00427	- GRADER WITH HYDRAULIC DRIVE (150) hp. AT (2200)rpm WITH RECOMMENDED SPARE PARTS	NO.	2	"
08-05-00428	- SIDE BOOM 571 WITH RECOMMENDED SPARE PARTS	NO.	3	"
08-05-00429	- SIDE BOOM 572 WITH RECOMMENDED SPARE PARTS	NO.	5	"

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

LIGHT CONSTRUCTION MACHINERY AND ACCESSORIES .

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00430	- FORK LIFT 5 TONS WITH RECOMMENDED SPARE .	NO.	2	Hydraulic Testing equipment
08-05-00431	- PORTABLE ROTARY SCREW COMP. WITH WATER COOLED ENG. MAX. WORKING PRESSURE (20) bar. WITH RECOMMENDED SPARE PARTS.	NO.	4	"
08-05-00432	- WATER PUMPS FILLING WITH CAPACITY (0-500)Cu.m./h , TOTAL HEAD (397-273-228)m WITH RECOMMENDED SPARE PARTS.	NO.	2	"
08-05-00433	- TEST PUMP HORIZONTAL TRIPLEX PISTON PUMP, CAP. (200)l/min , WORKING PRS. (260)bar , ENGINE RATING (100)kw AT 1800 rpm WITH RECOMMENDED SPARE PARTS.	NO.	2	"
08-05-00434	- DEWATERING PUMP CENTRIFUGAL PUMP WITH CAP. (250)Cu.m./h , PUMP INPUT 60 kw , ENGINE POWER (65-85) kw DIESEL FUEL WITH RECOMMENDED SPARE PARTS.	NO.	4	"
08-05-00435	- GENERATORS / SKID 250-300 KVA WITH RECOMMENDED SPARE PARTS.	NO	2	"

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ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

LIGHT CONSTRUCTION MACHINERY AND ACCESSORIES .

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00436	- WELDING MACHINES DIESEL DRIVEN / 400 Amp WITH RECOMMENDED SPARE PARTS.	NO	100	Light construction equipment
08-05-00437	- ELECTRICAL WELDING MACHINES (400 – 600) Amps WITH RECOMMENDED SPARE PARTS.	NO	20	"
08-05-00438	- PIPELINE BORING MACHINE WITH RECOMMENDED SPARE PARTS	SET.	2	"
08-05-00439	- CLAMPS INTERNAL & EXTERNAL VARIOUS WITH RECOMMENDED SPARE PARTS.	SET.	4	"

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES

SPARE PARTS FOR CONSTRUCTION MACHINERY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00440	- SPARE PARTS FOR MAINTENANCE OF SIDE BOOM /CAT. 583,572,571	ITEM.	100	Spare parts for general maintenance
08-05-00441	- SPARE PARTS FOR MABULLDOZERS/CAT. D9,D8,D7	ITEM.	50	"
08-05-00442	- SPARE PARTS FOR MAINTENANCE OF SHOVELS/CAT./LIEBHER	ITEM.	50	"
08-05-00443	- SPARE PARTS FOR MAINTENANCE OF GRADERS/CAT.	ITEM.	30	"
08-05-00444	- SPARE PARTS FOR MAINTENANCE OF EXCAVATORS. LIEBHER/CASE	ITEM.	50	"
08-05-00445	- SPARE PARTS FOR MAINTENANCE CRANES , TADANO/P&H LIEBHER	ITEM.	100	"
08-05-00446	- SPARE PARTS FOR MAINTENANCE OF CRC/EVANS EQUIPMENT	ITEM.	400	"
08-05-00447	- SPARE PARTS FOR MAINTENANCE OF WELDING MACHINES LINCOLN .	ITEM.	50	"
08-05-00448	- SPARE PARTS FOR MAINTENANCE OF GENERATORS MUNRADTECH/DETROIT .	ITEM.	50	"

LOCATION : ALL SIT SPARE PARTS FOR CONSTRUCTION MACHINERY .

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00449	- SPARE PARTS FOR MAINTENANCE OF WATER PUMPS KSB	ITEM.	60	Spare parts for maintenance
08-05-00450	- SPARE PARTS FOR COMPRESSORS / ATLAS COPCO ,AIRMAN .	ITEM.	40	"
08-05-00451	- SPARE PARTS FOR FORK LIFT.S./KOMATSU / YALE	ITEM.	40	"

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES SPARE PARTS FOR TRANSPORT EQUIPMENT .

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00452	- SPARE PARTS FOR HEAY TRUCKS . SCANIA/RENAULT	ITEM.	1000	Spare parts for transportation

LOCATION : ALL SITES CONSTRUCTION CONSUMABLES

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00453	- PIPELINE LAYING ACCESSORIES AND CONSUMABLES	ITEM.	30	Equipment for tank construction
08-05-00454	- TANK ERECTION ACCESSORIES AND CONSUMABLES	ITEM.	40	"
08-05-00455	- WORKSHOP TOOLS & EQUIPMENTS	ITEM.	50	"

MINISTRY OF OIL SHEET NO. 12 OF 12

ESTABLISHMENT NAME : OIL PROJECTS COMPANY (SCOP)

LOCATION : ALL SITES / TYRES

CODE	ITEM DESCRIPTION	UNIT	QTY.	COMMENT
08-05-00456	- TYRES FOR HEAVY TRANSPORT 1200 x 20	NO.	1200	Spare tyres for transportation
08-05-00457	- TYRES FOR HEAVY TRANSPORT 1200 x 24	NO.	400	"
08-05-00458	- TYRES FOR HEAVY EQUIPMENT 1100 x 20	NO.	200	"
08-05-00459	- TYRES FOR TRANSPORT EQUIPMENT 825 x 15 & 1000 x 15	NO.	200	"

MINISTRY OF OIL **SHEET NO. 1 OF 3**

ESTABLISHMENT NAME : OIL EXPLORATION COMPANY

LOCATION : BAGHDAD

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	-INTEGRATED PROJECT FOR TRANSCRIPTION , SCANNING , MANAGMENT , PROCESSING AND INTERPRETATION 2D/3D SYSTEM FOR SEISMIC DATA RE-PROCESSING FOR OIL FIELD PRODUCTION ENHANCEMENT AND OPTIMIZATION			Refers to Ahdad, W Qurna, and Bin Hassan. Project to determine the size and status of existing producing horizons and build accurate reservoir models to optimise production & reservoir management
08-05-00460	-HARDWARE FOR DATA RECOVERY DEVICES	NOS.	6	"
08-05-00461	-HARDWARE/SOFTWARE FOR DATA TRANSCRIPTION TO HIGH DENSITY MEDIA	SET	1	"
08-05-00462	- HARDWARE/SOFTWARE FOR SCANNING AND VECTORIZING SEISMIC SECTIONS , WELL LOGS AND ASSOCIATED DOCUMENTS	SET	1	"
08-05-00463	- 2D/3D LAND DATA PROCESSING AND INTERPRETATION SYSTEM	SYST. M	1	"
08-05-00464	-GEOLOGICAL INTERPRETATION SOFTWARE (INTEGRAL PLUS)	NOS.	1	"
08-05-00465	-GEOLOGICAL RESERVOIR SOFTWARE	NOS.	1	"

MINISTRY OF OIL **SHEET NO. 2 OF 3**

ESTABLISHMENT NAME : OIL EXPLORATION COMPANY

LOCATION : BASRAH, KIRKUK, & RAMADI

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	- 3D SEISMIC ACQUISTION FOR OIL FIELD PRODUCTION ENHANCEMENT & OPTIMIZATION			"
08-05-00466	-SEISMIC ENERGY SOURCE VIBRATOR 60,000 lb= 23 TONS	NOS.	10	"
08-05-00467	-DRILLING RIG CAPACITY 100 MTRS. MOUNTED ON BUGGY	NOS.	2	"
08-05-00468	-PORTABLE DRILLING RIGS	NOS.	3	"
08-05-00469	-GPS GLOBAL POSITIONING SYSTEM	SET	1	"
08-05-00470	-TELEMETRY RECORDING UNIT	NOS.	120	"
08-05-00471	-GEOPHONE STRINGS	SET	1 000	"
08-05-00472	-260SEISMIC CABLES EACH OF 330 METERS LENGTH WITH 15 TRANSMISSION CABLES EACH OF 440 METERS	NOS.	275	"
08-05-00473	-3D PRE-PLANNING AND QUALITY CONTROL FIELD PROCESSING SYSTEM	NOS.	2	"
08-05-00474	-FIRE FIGHTING VEHICLES	NOS.	2	Safety

MINISTRY OF OIL

SHEET NO. 3 OF 3

ESTABLISHMENT NAME : OIL EXPLORATION COMPANY

LOCATION : BAGHDAD

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
	- GEOCHEMICAL STUDIES AND ANALYSES OF PRODUCING FIELDS OILS AND RESERVOIRS			"
08-05-00475	-SPARE PARTS & OPRATIONALFOR STRUERS PRE-GRINDING AND POLISHING	SET	1	"
08-05-00476	-FLOW CONTROLLER FOR GAS SERVICE	NOS.	4	"
08-05-00477	-SPARE PARTS FOR MERCURY INJECTION	SET	1	"
08-05-00478	-SPARE PARTS FOR CENTRIFUGAL EXTRACTOR	SET	1	"
08-05-00479	-CALIBRATION STANDARD AND FLOW CONTROLLER ASSEMBLY	SET	1	"
08-05-00480	-SPARE PARTS FOR LECO (CR-12) MODEL NO. (781-700)	SET	1	"
08-05-00481	-CHN ELEMENTAL ANALYZER INSTRUMENT	NOS.	1	"
08-05-00482	-WORK STATIONS	NOS.	6	"

ESTABLISHMENT NAME:NORTH REFINERIES CO.
LOCATION :BAIJI

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00483	WASTE WATER TREATMENT PLANT REVAMP WHICH INCLUDES:			Balance of spare parts order for repairs to waster water treatment plant, of which first order approved under Phase 4 application.
	- REPAIR AND/OR REPLACEMENT OF FAULTY EQUIPMENT AND MATERLALS FOR SAL 1 AND NORTH REFINERY W WT UNITS.	LOT	2	
	- ALL PLANT WASTE WATER CONTROL ROOM FOR SAL1,SAL2,AND NORTH REFINERY WWT UNITS.	LOT	3	
	- COMMON PARTS WITH SAL 1& SAL2 UNITS, INCLUDING STORM WATER PUMPS AND TANKS, SAFETY EQUIPMENT,SLOP OIL HANDLING SYSTEMS,LABORATORY EQUIPMENT AND MATERIALS AND 28"DISCHARGE PIPELINE OF 6KM LENGTH.	LOT	2	
	- CENTRAL SLUDGE TREATMENT UNIT FOR SAL1 SAL2, NORTH REFINERY AND LOC WWT UNITS SLUDGES	LOT	2	
	- LOC WWT BIOLOGICAL TREATMENT REJUVENATION & CONNECTION TO SAL1 CHECK BASIN VIA 12" PIPELINE OF 1.5 KM LENGTH.	SET	2	
08-05-00484	HYDROCRACKER & ASSOCIATED UNITS REVAMP:			Application for the refurbishing of the hydrocracker unit which will increase the quality of refined products produced, which can then be substituted in power stations releasing up to 60,000 bpd of crude oil for export
	- HYDROCRACKER UNIT:REPAIR & REPLACE FAULTY EQUIPMENT AND MATERIALS.	LOT	1	
	- HYDROGEN PRODUCTION UNIT: REPAIR & REPLACE FAULTY EQUIPMENT AND MATERIALS.	LOT	1	
	- VACUUM UNIT: REPAIR & REPLACE FAULTY EQUIPMENT AND MATERIALS.	LOT	1	
	- SULFUR RECOVERY UNIT: REPAIR & REPLACE FAULTY EQUIPMENT AND MATERIALS.	LOT	1	
	- UTILITIES AND COMMON PARTS:			
	-REPAIR & REPLACE FAULTY EQUIPMENT AND MATERIALS.	LOT	3	
	- SUPPLY OF AN RO DESALINATION UNIT OF 400 M3/H	LOT	1	
	- TO PROVIDE CUSTOMIZED SPECIAL INSPECTION EQUIPMENT & MATERIALS.	LOT	25	
	** THESE UNITS WERE BUILT TO PRODUCE GAS OIL OF VERY LOW SULFUR CONTENT TO COMBAT AIR POLLUTION.			

MINISTRY OF OIL

ESTABLISHMENT NAME:NORTH REFINERIES CO.

LOCATION :BAIJI

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00485	MECHANICAL EQUIPMENT COMPLETES & SPARE PARTS KITS:			Further repairs to the mechanical equipment. Enhancing efficiency of the refinery and quality of products allowing fuel oil to be burned in associated power station. Claimed will release 100,000 bpd of crude oil for export
	- PUMPS "NEW SETS"	SETS	120	
	- PUMPS" REPAIR KITS SETS"	SETS	5000	
	- STEAM TURBINES" NEW SETS"	SETS	100	
	- STEAM TURBINES" REPAIR KITS SETS":	SETS	4000	
	- COMPRESSORS "REPAIR KITS SETS":	SETS	1000	
	- GEAR BOXES	SETS	5	
	- FINFAN COOLING BUNDLES	SETS	25	
	- HEAT EXCHANGER BUNDLES	SETS	50	
	- TUBES , PIPES , FITTINGS	SETS	100	
	- VALVES , GASKETS	SETS	1000	
	- SUPER HEATER COILES	SETS	4	
08-05-00486	INSTRUMENTATION CONTROL SYSTEM SPARE PARTS "NEW SETS":			"
	- TELEPHONE EXCHANGE AND AUXILLARIES	SET	1	
	- CONTROL VALVES,PRESSURE TRANSMITTERS,LEVEL TRANSMITTERS ETC.....	SET	1000	
08-05-00487	MAINTENANCE AND TRANSPORT VEHICLES:			"
	- CRANE 120 TONS	NOS	1	
	- FORKLIFTS	NOS	10	
08-05-00488	INSTRUMENTS FOR ENVIRONMENTIAL PROTECTION AND LABORATORIES DEVICES	NOS	30	Re-equiping environmental testing laboratory
08-05-00489	- REFORMING & HYDROTREATING CATALYST	TONS	500	Increases efficiency of operating unit
08-05-00490	- FIRE FIGHTING TRUCKS	NOS	2	Safety related
08-05-00491	- OIL SKIMMING EQUIPMENT	SETS	4	Repeat of application in Phase 4

MINISTRY OF OIL

SHEET NO. 1 OF 2

ESTABLISHMENT NAME: MIDLAND REFINERIES CO.

LOCATION: DAURA REFINERY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00492	WATER TREATMENT PLANT COMPLETE (RO) 510 CUBIC METER CAPACITY WITH RECOMMENDED SPARE PARTS AND ACCESSORIES	SET	1	Replacement water treatment plant to control effluent water quality which is discharged into River Tigris
08-05-00493	- VEHICLES & TRUCKS:- -CRANES WITH SPARE PARTS: 50 TON 2.5 TON - WASTE WATER TANKERS WITH SPARES -DIESEL DRIVEN WELDING MACHINES WITH SPARES -AIR COMPRESSORS WITH SPARES -VACUUM TRUCKS WITH SPARES -HAND TOOLS , DRILLS , WRENCHES , EXPANDERS AND TESTING DEVISES WITH SPARES -GARBAGE TRUCK WITH SPARES	 NO. NO. NO. NO. NO. NO. PCS NO.	 1 1 2 15 7 1 2000 1	Maintenance
08-05-00494	- PUMPS COMPLETE, COMPRESSORS COMLETE, FANS, GEARS, STEAM TURBINES, ... etc - SPARE PARTS FOR ABOVE MACHINES & SPARE PARTS FOR EXISTING MACHINES	SETS PCS	300 4000	Downstream production improvements
08-05-00495	- ELECTRICAL EQUIPMENT,MCC,MOTORS,STARTERS,... etc - SPARE PARTS FOR ABOVE EQUIPMENT AND SPARE PARTS FOR EXISTING EQUIPMENT	SETS PCS	200 3000	"
08-05-00496	- INSTRUMENTS COMPLETE , TRANSMITTERS RECORDERS, INDICATORS, CONTROLLERS, AIR DRYERS. - SPARE PARTS FOR ABOVE AND SPARE PARTS FOR EXISTING INSTRUMENTS	SETS PCS	1000 3000	"
08-05-00497	- SPARE PARTS FOR BOILERS AND FURNACES (TUBES, BURNERS, FLAME DISTRIBUTORS, REFRACTORY, HIGH TEMPERATURE, CASTABLE CEMENT, SOOT BLOWERS,...etc	METERS TON. PCS	10000 30 4000	"

MINISTRY OF OIL

SHEET NO. 2 OF 2

ESTABLISHMENT NAME: MIDLAND REFINERIES CO.

LOCATION: DAURA REFINERY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00498	- PIPES (SIZES FROM 1 - 12 INCHES) - FITTING,GASKETS,ELBOWS, FLANGES, VALVES, REDUCERS, HOT TAPPING MACHINES, LEAK SEALING KITS	METERS PCS	25 000 15 000	These items were ordered in Phase 4, and have been re-ordered
08-05-00499	- CONSUMABLES (WELDING ELECTRODES) - TOOLS AND ACCESSORIES (GRINDING DISCS)	TONS PCS	10 1000	Maintenance items
08-05-00500	- INSPECTION TOOLS & EQUIPMENT AND MEASURING EQUIPMPENT FOR ENVIRONMENTAL PROTECTION AND TESTING LABORATORY EQUIPMENT	SET	150	Environmental protection and testing laboratory equipment
08-05-00501	-SPARE PARTS FOR WATER TREATMENT UNIT (IONICS)	SETS PCS	30 6000	Spare Parts for water treatment plant
08-05-00502	- SPARE PARTS FOR LUBE OIL EQUIPMENT, ROTATRY FILTER, CHILLERS, SPEED VARIATORS	SETS PCS	100 3000	Spare Parts for lube oil plant, allowing production of 100,000 tonnes per annum of lube oil
08-05-00503	- SPARE PARTS FOR DRESSER RAND 4 – MW GENERATOR	SETS PCS	100 500	Spare Parts for power generation
08-05-00504	- BOILER + DEMIN . PLANT	SET	1	Spare Parts for boiler plant and demineralisation plant

MINISTRY OF OIL

SHEET NO. 1 OF 1

ESTABLISHMENT NAME : SOUTH REFINERIES CO. SC.

LOCATION : BASRAH

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00505	-COMPLETE ROTATING MACHINES : (PUMPS.COMPRESSORS,TURBINES FANS, GEARBOXES) FOR BASRAH REFINERY UNITS	NOS	40	Overall application for spare parts would improve gas oil and fuel oil quality releasing 50,000 bpd of crude for export
	-SPARE PARTS FOR ABOVE ROTATING MACHINES	SET	150	
08-05-00506	-MEASURING & CONTROL INSTRUMENTS	NOS	100	"
	-SPARE PARTS FOR THE ABOVE INSTRUMENTS	SET	150	
	-THERMOCOUPLE & CONTROL CABLES	METER	1000	
08-05-00507	-ELECTRICAL MOTORS & MCC	NOS	15	"
	-SPARE PARTS FOR ABOVE ELECTRICAL EQUIPMENT	SET	50	
08-05-00508	-INSTRUMENTS FOR ENVIRONMENTAL PROTECTION	NOS	15	Gas analysis equipment
	-LABORATORY DEVICES	NOS	4	
08-05-00509	-COMPLETE HEAT EXCHANGERS BUNDLES	NOS	50	Replacement heat exchanger units
	-SPARE PARTS FOR HEAT EXCHANGERS (GASKETS-ETC) & TOOLS	SET	300	
08-05-00510	-CRANE 120 TONS & SPARES	NOS	1	Maintenance and improvement of water quality from mains
	-TANKERS FOR DRINKING WATER	NOS	2	
	-FORKLIFTS (DIFFERENT CAPACITES)	NOS	10	
	-SPARE PARTS FOR ABOVE	SET	100	
08-05-00511	- STEAM BOILER 150 T/HR REHABILITATION	NOS	1	Maintenance
08-05-00512	- PACKAGE NITROGEN UNIT	NOS	1	Safety item as N2 required for refinery blanketing operations
	- SPARE PARTS FOR ABOVE	SET	20	
08-05-00513	-PIPES DIFFERENT SIZES AND MATERIALS	KM	15	Maintenance
	-FITTINGS, VALVES, DIFFERENT SIZES, MATERIALS & TYPES, BOLTS & NUTS DIFFERENT SIZES	NOS	20 000	

MINISTRY OF OIL
ESTABLISHMENT NAME: NORTHERN GAS INDUSTRY
LOCATION : KIRKUK

SHEET NO: 1 OF 1

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00514	- AL UMINUM ALLOY GAS HEAT EXCHANGER	NOS	1	All items in this section refer to removal of gas from crude oil .
08-05-00515	SET OF VALVE TRAYS FOR SWEETENING UNIT-	SET	2	Refers to spare parts for absorber unit
08-05-00516	ROTARY MACHINES & SPARES -	PCS	3000	Spares for pumps and turbines
08-05-00517	ELECTRICAL &CONTROL INSTRUMENTS & SPARES-	SET	15	Spare for data logging and control panels
08-05-00518	TRUCKS FOR LIFTING & HANDLING EQUIPMENT-	NOS	4	Maintenance
08-05-00519	FIRE FIGHTING TRUCKS-	NOS	2	Trucks for foam and chemical fire-fighting not ordered before
08-05-00520	INSTRUMENTS FOR ENVIRONMENTAL PROTECTION - AND LABORATORY DEVICES	NOS	15	Monitors for H2S and toxic gases.

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MINISTRY OF OIL

SHEET NO. 1 OF 1

ESTABLISHMENT NAME: SOUTH GAS CO.SC.

LOCATION : BASRAH

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00521	- COMPLETE ROTATING MACHINES: (PUMPS, COMPRESSORS, GAS TURBINES)	NOS	20	Complete line replacement for 25 kms of pipe allowing oil to be transferred North
	- SPARE PARTS FOR ABOVE (INSTRUMENTS, LIGHTING , CABLES, MOTORS)	SET	200	
	- PIPES	METER	25000	
	- FITTINGS	PCS	15000	
	- TOOLS	SETS	100	
08-05-00522	VEHICLES & TRUCKS WITH SPARE PARTS :-			Items associated with line construction and maintenance
	- CRANES:			
	50TON	NOS.	2	
	30TON	NOS.	1	
	20TON	NOS.	1	
	10TON	NOS.	1	
	- TANKER TRUCKS FOR WATER TRANSPORTATION:			
	20TON	NOS.	3	
	35TON	NOS.	3	
	- LORRIES 12 TON WITH CRANE 9TON MIN. CAPACITY	NOS.	4	
	- FORK LIFT TRUCKS:			
	5 TON	NOS.	3	
	3 TON	NOS.	2	
08-05-00523	- FIRE FIGHTING TRUCKS &SPARE PARTS	NOS	2	Safety and maintenance
	- SAFETY EQUIPMENT & SPARE PARTS	SET	4	
	- INSPECTION EQUIPMENT & SPARE PARTS	SET	2	
08-05-00524	- MEASURING & ELECTRICAL TOOLS	SET	20	Metering equipment

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MINISTRY OF OIL

SHEET NO: 1 OF 2

ESTABLISHMENT NAME: OIL PRODUCTS DISTRIBUTION CO.

LOCATION: BAGHDAD

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00525	-TRUCK TRACTORS 6X4 (STANDARD)	NOS	50	All items in this sector refer to the vehicular distribution of products. Improvements will reduce environmental effects, and reduce leakage from the current 7% overall
08-05-00526	- SEMI TRAILORS FOR TRANSPORTING LPG CAP. 20 TONS (46000LIT.)	NOS	50	"
08-05-00527	- RECOVERY TRUCKS LIFTING CAP 20 - 25 TONS	NOS	5	"
08-05-00528	FORK LIFT CAP. 5 TONS-	NOS	10	"
08-05-00529	WORKSHOP MOBILES -	NOS	5	"
08-05-00530	- FIRE FIGHTING EQUIPMENT : FIRE FIGHTING VEHICLE PUMPS ACCESSORIES AND PARTS	 NOS NOS NOS	 2 5 200	"
08-05-00531	PETROL STATIONS: - FUEL DISPENSERS RECOMMEDED SPARE PARTS PUMPS - WITH RECOMMEDED SPARE PARTS	 NOS NOS	 400 100	"
08-05-00532	- -PRODUCT MEASURING METERS SIZE 11/2",3" WITH SPARE PARTS	NOS	100	"
08-05-00533	- PETROLEUM SUPPLY HOSES 3/4" TO 6"	NOS	4000	"
08-05-00534	PIPES SIZES FM2"-6"- FITTINGS FM2"-6"-	METER NOS	20000 5000	"
08-05-00535	ELECTRIC CABLES- -CIRCUITS, CONTACTORS -LIGHTING FITTINGS	METER NOS NOS	50000 5000 25000	"
08-05-00536	FUEL LOADING AND UNLOADING PUMPS: - ELECTRIC DRIVEN - DIESEL DRIVEN (CAP. 45 M3/H)	 NOS NOS	 50 25	"

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MINISTRY OF OIL

SHEET NO: 2 OF 2

ESTABLISHMENT NAME: OIL PRODUCTS DISTRIBUTION CO.

LOCATION: BAGHDAD

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00537	- VACUUM TRUCKS FOR SUCTION AND TRANSPORT SLOPS AND SLUDGE WITH THE REQUIRED SPARE PARTS	NOS	5	"
08-05-00538	DIESEL ELECTRICAL GENERATOR 50 KVA 100 KVA 250 KVA	 NOS NOS NOS	 15 10 4	"
08-05-00539	- -INSTRUMENTS FOR MEASURING HYDROCARBON GASES & INSPECTION TESTING.	NOS	40	"
08-05-00540	- - STEEL PLATES TO MANUFACTURE 50M3 STORAG TANKS THICKNESS 6-10 MM - WELDING ELECTRODES	TON TON	1200 15	Construction of 50M3 tanks for local produci storage
08-05-00541	- WIRES FOR SFALING THE TANKS AND VALVES - TOOLS FOR ABOVE - TAGS WITH PRINTED SERIAL NOS.	METER NOS NOS.	200 000 20 100 000	Sealing wires
08-05-00542	- LEVEL CONTROL EQUIPMENT FOR SERVICE STATION & DEPOTS	NOS	100	Control equipment to prevent spillage
08-05-00543	- WELDING MACHINES DIESEL DRIVEN	NOS	20	Maintenance
08-05-00544	- LABORATORY TESTING EQUIPMENT	NOS	100	Quality control
08-05-00545	-COMPLETE ENGINES TO REPLACE DAMAGED ONES ON EXISTING TRUCKS - VARIOUS TYPES	NOS	100	Replacement engines for transportation

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CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00546	- FLOW METER COMPLETE FOR MEASURING QUANTITIES OF OIL PRODUCTS PUMPED IN PIPELINES INCLUDING MECHANICAL PARTS OF DIFFERENT SIZES (3-12) INCHES	NOS.	80	Metering equipment for transfer of product to power wstations
08-05-00547	- DENSITY METER COMPLETE UNIT FOR CONTROL OF MULTI-OIL PRODUCTS IN PIPELINES WITH ACCESSORIES	SETS	10	Analytical equipment to prevent contamination on line transfers
08-05-00548	CATHODIC PROTECTION MATERIALS AND EQUIPMENT TO PROTECT PIPELINES FROM CORROSION:			Anti corrosion equipment for pipelines
	– T/R STATIONS (50-100) A VDC/50-150 COMPLETE UNIT	NOS.	10	
	– MEASURING EQUIPMENT	NOS.	1	
	– HIGH SILICON-CHROMIUM IRON ANODES	NOS.	300	

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CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00549	- SPARES FOR AUTOMATIC CONTROL AND SUPERVISION EQUIPMENT IN DEPOTS AND PUMPING STATIONS TO CONTROL STORAGE AND PUMPING OF OIL PRODUCTS INCLUDING SPARE PARTS FOR VALVES, LEVEL TANKS, AIR-CONDITIONING, CONTROL PANELS AND COMPUTERS	ITEM	10000	Improvement to control equipment for product transfer
08-05-00550	-ELECTRICAL (H.T 33KV) SWITCH GEAR FOR MOTORS AND CONTROL EQUIPMENT IN OIL DEPOTS AND PUMPING STATIONS WITH ACCESSORIES AND SPARE PARTS	SETS	2	"
08-05-00551	-AUTOMATIC LOADING ARMS FOR REFUELING OIL TANKS (ROAD AND RAIL) WITH TWO YEARS RECOMMENDED SPARE PARTS, COMPLETE ASSEMBLY	NOS.	50	Equipment to prevent spillages on loading of vehicles
08-05-00552	-LIGHTING EQUIPMENT FITTINGS AND LAMPS (INDUSTRIAL) OF DIFFERENT SIZES AND TYPES FOR OIL DEPOTS AND PUMPING STATIONS	NOS.	10000	Alarms and neon lamps for control equipment

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00553	-MOTOR PUMPING SETS, ELECTRICAL AND DIESEL DRIVEN, FOR LOADING AND OFF-LOADING OIL PRODUCTS OF DIFFERENT SIZES AND TYPES WITH TWO YEARS RECOMMENDED SPARE PARTS	NOS.	25	Pumping equipment for product transfer
08-05-00554	-JOINTING KIT OF DIFFERENT TYPES AND SIZES FOR HIGH, MEDIUM POWER CABLES AND TELECOMMUNICATION CABLES	ITEMS	1000	Repairs to communications equipment
08-05-00555	-GENERATING SETS COMPLETE DIESEL DRIVEN OF DIFFERENT SIZES (250-1000) KVA	NOS.	10	Generating sets for emergency use in the field
08-05-00556	-TRUCK TANKER COMPLETE WITH PUMP TO SUCK OIL SLUDGE AND WASTE FOR ANTI-POLLUTION PURPOSES	NOS.	2	Control of spillages and sludge treatment

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00557	-FIRE FIGHTING PUMPS ELECTRICAL AND DIESEL DRIVEN SKID MOUNTED (COMPLETE PUMP SET) WITH RECOMMENDED SPARE PARTS FOR TWO YEARS OPERATION OF DIFFERENT SIZES UP TO 150 M^3/HR WITH PRESSURE OF (15) BARS	NOS.	3	Fire fighting and safety
08-05-00558	-PETROLEUM TESTING EQUIPMENT (LABORATORY) OF DIFFERENT TYPES TO CHECK SPECIFICATIONS OF OIL PRODUCTS IN OIL DEPOTS AND OIL PUMPING STATION	NOS.	3000	Laboratory analysis equipment for quality control
08-05-00559	VALVES TO CONTROL FLOW OF OIL PRODUCTS IN PIPELINES, OIL DEPOTS AND PUMPING STATIONS, DIFFERENT SIZES AND CLASSES	NOS.	100	Control of product distribution
08-05-00560	FLEXIBLE HOSES FOR HANDLING OIL PRODUCTS, ARMORED TYPE OF DIFFERENT SIZES AND LENGTHS	NOS.	250	"

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MINISTRY OF OIL

SHEET 5 OF 8

ESTABLISHMENT: OIL PIPELINES COMPANY

LOCATION: OIL DEPOTS / PUMPING STATIONS / PIPELINES NETWORK

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00561	-TELEPHONE EXCHANGE COMPLETE UNIT WITH ALL ACCESSORIES OF DIFFERENT SIZES AND CAPACITIES	NOS.	5	PABX system for communication systems
08-05-00562	-TELECOMMUNICATION EQUIPMENT FOR INTER DEPOTS COMMUNICATIONS	ITEM	100	Inter depot communications
08-05-00563	- POWER CABLE MEDIUM AND HIGH VOLTAGE DIFFERENT SIZES	KM	20	Communications equipment
	- MULTI-CORE CONTROL CABLES	KM	30	
	- MULTI-CORE TELECOMMUNICATION CABLES DIFFERENT SIZES	KM	20	
08-05-00564	-SPARE PARTS FOR EXISTING PUMPS SETS OPERATIONAL IN DEPOTS AND PUMPING STATIONS INCLUDING MAIN AND BOOSTER PUMPS AND VALVES	ITEM	10000	Spare parts for distribution system
08-05-00565	- FIRE FIGHTING TRUCKS FOR OIL INDUSTRY C/W ALL RECOMMENDED SPECIALIZED EQUIPMENT	NOS.	3	Safety equipment
	- TRUCK FIRE FIGHTING WATER TANKERS OF DIFFERENT CAPACITIES	NOS.	2	

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ESTABLISHMENT: OIL PIPELINES COMPANY

LOCATION: OIL DEPOTS / PUMPING STATIONS / PIPELINES NETWORK

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00566	-HIGH AND LOW TENSION ELECTRICAL MEASURING AND TESTING EQUIPMENT	NOS.	60	Electrical measuring equipment ("mega's" and avo's")
08-05-00567	-MOTOR VEHICLE EQUIPPED WITH HYDRAULIC PLATFORM FOR STREET LIGHTING MAINTENANCE	NOS.	2	Safety equipment
08-05-00568	-HOT TAP EQUIPMENT WITH ALL RELEVANT ACCESSORIES AND WITH RECOMMENDED SPARE PARTS	NOS.	2	Equipment for dealing with pipe leakages whilst pipes in use
08-05-00569	-PIPE FITTINGS OF DIFFERENT SIZES AND SCHEDULES TO SUIT PIPE SIZE (3-16) INCHES	PIECES	1000	Equipment for distribution system
08-05-00570	-HYDROSTATIC TESTING EQUIPMENT, DIESEL DRIVEN, UP TO (150) BARS	NOS.	2	Line pressure testing
08-05-00571	-EARTH MOVING EQUIPMENT			Maintenance
	- MECHANICAL SHOVELS OF DIFFERENT SIZES	NOS.	2	
	- EXCAVATORS OF DIFFERENT SIZES	NOS.	2	

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00572	LIFTING EQUIPMENT			Maintenance equipment
	- FORK LIFTS OF DIFFERENT SIZES	NOS.	2	
	- CRANE SIZE (20) TONS	NOS.	1	
	- COMBINED TRUCKS LOADING VEHICLES OF DIFFERENT SIZES	NOS.	3	
	- OVERHEAD CRANES ELECTRICALLY DRIVEN COMPLETE WITH ACCESSORIES (5) TONS	NOS.	1	
08-05-00573	-ELECTRICAL WELDING SETS TRANSFORMER AND DIESEL TYPES OF DIFFERENT SIZES (20-400) AMPERES	NOS.	15	"
08-05-00574	-WELDING RODS OF DIFFERENT SIZES AND TYPES	TON	10	"
08-05-00575	-MECHANICAL MEASURING AND TESTING TOOLS	NOS.	30	"
08-05-00576	-TRANSFORMER OIL DRIER AND PURIFIER MACHINE, TRUCK MOUNTED WITH ACCESSORIES AND RECOMMENDED SPARE PARTS	NOS.	2	"

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00577	-GASKETS DIFFERENT SIZES AND SCHEDULES WITH DIAPHRAMS	NOS.	10000	Workshop equipment
08-05-00578	-WORKSHOP MECHANICAL AND ELECTRICAL DIFFERENT TOOLS	NOS.	200	"
08-05-00579	-LINE PIPE OF DIFFERENT SIZES, SCHEDULES, TYPES	KM	10	"

MINISTRY OF OIL **SHEET NO. 1 OF 3**

ESTABLISHMENT NAME: GAS FILLING CO.

LOCATION: ALL OVER THE COUNTRY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00580	- LPG CYLINDERS	NOS	500 000	Replacement of dangerous cylinders
08-05-00581	LPG CYLINDER VALVE & THEIR SPARE PARTS:			Replacement cylinder valves
	COMPLETE VALVES	NOS	250 000	
	SPINDLES	NOS	3 000 000	
08-05-00582	LPG CYLINDER FILLING HEADS & THEIR SPARE PARTS:			Replacement cylinder valves
	FILLING HEADS COMPLETT	NOS	500	
	SPARE PARTS	SET	10	
08-05-00583	STEEL PLATES FOR:-			Repair items for LPG cylinders
	LPG CYLINDER BODY	TON	2000	
	BASE RING	TON	500	
	GUARD RING	TON	500	
08-05-00584	- PRESSURE TESTING EQUIPMENT FOR LPG CYLINDERS	SET	5	Safety equipment
08-05-00585	-- DIES FOR MANUFACTURE OF GUARD RINGS, BASE RINGS & STRIPS CUTTING WITH THEIR SPARE PARTS	SET	10	To enable local repairs and production
08-05-00586	-- HYDRAULIC VALVES & SPARE PARTS FOR CYLINDER MANUFACTURING PLANT	SET	100	To enable local cylinder repair
08-05-00587	- PAINTING UNIT LPG CYLINDERS	SET	1	Maintenance
08-05-00588	- SPARE PARTS FOR LPG PLANTS:			Safety items for bottling plants
	MECHANICAL SPARE PARTS FOR FILLING	SET	240	
	LINESINSTRUMENTS & THEIR SPARE PARTS	SET	250	
	BALL VALVES, SAFETY VALVES, & THEIR SPARE PARTS	SET	500	
		NOS	100	
	LPG HOSES 2", FOR LOADING & UNLOADING OF TRUCKS	NOS	60	
		MTR.	400	
	HEAT EXCHANGER TUBES	NOS	2000	

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MINISTRY OF OIL

SHEET NO. 2 OF 3

ESTABLISHMENT NAME: GAS FILLING CO.

LOCATION: ALL OVER THE COUNTRY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00589	ELECTRICAL SPARE PARTS FOR LPG FILLING PLANTS:			Electrical spare parts and maintenance
	ELECTRIC MOTORS 1.5 - 120 KW	NOS	140	
	HIGH TENSION CIRCUIT BREAKERS	NOS	6	
	MULTI - CORE CABLES 2.5 - 120 SQ. MM	METER	50000	
	GENERAL ELECTRIC MATERIALS	NOS	13000	
	ELECTRIC GENERATORS 150 - 750 KVA	NOS	10	
08-05-00590	ROTATING MACHINES :-			Replacement items for 60 bottling plants throughout the country
	LPG COMPRESSORSAIR COMPRESSORS	NOS	30	
	LPG PUMPS	NOS	20	
	DIESEL WATER PUMPS	NOS	20	
	ELECTRICAL WATER PUMPS	NOS	10	
	SPARE PARTS FOR ABOVE	NOS	10	
		SET	1000	
08-05-00591	FIRE, SAFETY & INSPECTION EQUIPMENT:-			Safety items
	FIRE FIGHTING EQUIPMENT	NOS	750	
		SET	250	
	SAFETY EQUIPMENT			
	INSPECTION EQUIPMENT	NOS	100	
		NOS	20	

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MINISTRY OF OIL

SHEET NO. 3 OF 3

ESTABLISHMENT NAME: GAS FILLING CO.

LOCATION: ALL OVER THE COUNTRY

CODE	ITEM DESCRIPTION	UNIT	QTY	COMMENT
08-05-00592	CHEMICALS FOR LPG PROCESSING PLANT	TON	200	Additives to give an odour to LPG to detect leakage
08-05-00593	VEHICLES & TRUCKS WITH SPARE PARTS:			Safety equipment and maintenance, water transportation, fire fighting
	AMBULANCE	NOS	1	
	CRANE 50 TONS	NOS	1	
	TANKER TRUCK FOR WATER TRANSPORTATION 18000 L. CAPACITY.	NOS	1	
	TANKER TRUCK FOR OIL PRODUCTS TRANSPORTATION	NOS	1	
	LOW LOADER TRUCK 35 TON.	NOS	1	
	LORRY TRUCKS 15 TON	NOS	2	
	FIRE FIGHTING TRUCK	NOS	1	
08-05-00594	COMMUNICATION SYSTEMS:-			Communications equipment to control LPG distribution system
	DIGITAL ELECTRONIC EXCHANGE WITH 30 EXTERNAL LINES &480 INTERNAL LINES	SET	1	
	TELECOMMUNICATION SYSTEM VHF & UHF	NOS	25	

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